

RESEARCH ARTICLE

Evaluation of weed management practice in rice fallow blackgram to manage *Vicia sativa* in farmers fields in Visakhapatnam district of North Coastal Zone of Andhra Pradesh

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SUMMARY

Blackgram is major predominant crop during *Rabi* in Visakhapatnam district of Andhra Pradesh, cultivated in an area of 7,000 ha, out of total cropped area of 75,273 ha with productivity of 300 kg/ha. Farmers grow crop by adopting traditional method of cultivation in rice fallow situation, before harvesting of paddy fields blackgram seed broadcasted and crop is grown with residual soil moisture and nutrients. Among these factors, occurrence of weeds including re-growth of rice stubbles is one of the important factors during early stages as the weeds compete for scarce soil moisture and nutrients. Since, the black gram is sown under zero till condition, weed growth is severe and effectively competes with the crop. To manage the weeds and to increase the yield of rice fallow blackgram, post emergence chemical weed management with sodium acifluorfen 16.5% and Clodinafop-propargyl 8% EC with dosage of 1000 ml/ha ensured effective control of both dicot and monocot weeds in black gram introduced by DAATT Centre, Visakhapatnam district of ANGRAU, in collaboration with KVK, Kondempudi and Department of Agriculture. Chemical weed management method is boon to farmers by controlling the weeds helps in increasing the availability of residual moisture and nutrient to blackgram crops than normal method. Organized an On-Farm Demonstrations (OFDs) in 6 locations randomly covering entire district in *Rabi*, 2018-19 and *Rabi*, 2019-20. Grain yield increase was achieved to a tune of 31.34% in chemical weed management method (714 kg ha⁻¹) over normal method of cultivation (544 kg ha⁻¹). The increase in grain yield could be attributed to reduction in weeds, helped in more availability of nutrients and moisture which intern increase in yield attributes and yield.

Key Words : Rice fallow pulse, Blackgram, OFDs, Yield and yield attributes, B:C ratio

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