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Popularization of improved black gram production technology through front line demonstration in Vindhyan Paltue of M.P.

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ABSTRACT : Black gram is an important food legume widely consumed in India. It also plays an important role in sustainable agriculture enriching the soil through biological nitrogen fixation. The study was carried out during *Kharif* 2007-08 to 2010-11 at farmer's field of adopted village of Raisen District. Front line demonstration on black gram crop was conducted in an area of 20 ha with active participants of 48 farmers with the objective to demonstrate the latest technology of black gram production potential, analysis of extension gap, technology gap, technology index, economic benefit of improved technology. The Result revealed that maximum grain yield 9.75 q/ ha was recorded during *Kharif* 2010-11 with an increase in 40.29 % over local check (6.95 q/ ha). Improved technology of black gram recorded progressively increased average grain yield during four year of study from 7.56 q /ha to 9.75 q /ha with a range of 29.23 to 40.29 percent increase over farmer practices. In addition to increase in yield of black gram, mean extension gap, technology gap, technology index, was found 2.18, 3.34 q ha and 27.81 percent respectively. The additional cost of Rs 1410 to Rs 1755 gave additional net return it was ranged from Rs 2865 to Rs 5245 per ha. With 1:2.01 to 1:2.98 incremental benefit: cost ratio.

Key Words: Black gram (*Vigna mungo* L. Hepper), yield gap, technology gap, extension gap, frontline demonstration, economics.