

EFFECT OF SOME SELECTED PRE-EMERGENT HERBICIDES
ON WEED DRY WEIGHT AND
SEED YIELD OF BLACK GRAM (VIGNA MUNGO L)

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An experiment was conducted at the Government Seed Farm, Pelvehera during Maha Season 1987/88 to evaluate the potential of some selective pre-

emergent herbicides in order to develop an economical weed program for black gram (Vigna mungo L.) grown for seed production purpose.

Seven selected pre-emergent herbicides of Metolochlor, Alachlor, Oxadiazon, Oxyfluorofen, Methabenzthiazuron, Linuron and Metribuzin at different rates were compared together with manually weeded and unweeded plots. The performance of treatments was evaluated using weed drymatter and seed yield and its components of black gram.

Metolochlor at 4.5 Kg/ha a.i gave the lowest weed dry weight at 4 weeks after seeding. But similar weed dry weight values were given by metolochlor at 1.5 - 2.0 Kg/ha a.i, alachlor at 1.5 - 4.5 Kg/ha a.i, oxadiazon at 1.0 - 2.0 Kg/ha a.i and Metribuzin at 0.5 - 1.0 Kg/ha a.i. However, Metribuzin caused the phytotoxicity on black gram plants. Metribuzin, methabenzthiazuron were inferior to other chemicals tested. Metolochlor gave the lowest weed dry weight even at the harvest. It contains a longer residual activity under rainfed conditions.

The highest total seed weight of black gram was produced by metolochlor at 1.5 Kg/ha a.i. There was no difference between the above treatment and alachlor, oxadiazon and linuron at the tested rates. The highest gross income was also obtained from the treatment that consisted of Metolochlor at 1.5 Kg/ha a.i. Manual weeding also gave non-significant grain yield and gross income.