

## STUDY ON EFFECTS OF WEED MANAGEMENT PRACTICES ON MONETARY ADVANTAGES AND QUALITY OF SESAME BASED INTERCROPPING WITH *KHARIF* SEASON CROPS

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**Abstract:** A field experiment was conducted during at SIF, C.S. Azad University of Agriculture & Technology, Kanpur-208002 (UP) during two *Kharif* seasons of 2015 and 2016. The experiment consisted 12 treatments having four intercropping viz, sesame + maize (4:1), sesame + maize (8:2), sesame + urd (4:1) and sesame + urd (8:2) and three weed management practices viz, Hand weeding, Pre-emergence of Pendimethaline 30% EC@3.0 L/ha and Early post-emergence of Alachlor 50% EC@ 0.75 kg/ha replicated four times. The experiment was laid out in Factorial Randomized Block Design. The main crop as Sesame of Shekhar variety and sub crops as Maize of P-3441 variety and urd of Shekhar-2 variety were used in the study year. The all weed flora were counted significantly lowest, in treatment of sesame + urd (8:2) inter cropping composed to remaining intercropping treatment during both the years, respectively. The grain yield of sesame was significantly higher produced in sesame + urd (8:2) treatment over other rest treatment during 2015 and 2016 years, respectively. The grain yield of maize and urd intercrops with sesame in 8:2 row ratio was statistically higher produced than 4:1 row ratio during both the years except urd intercrop in second year only. The monetary benefits of main crop (sesame) was recorded significantly more with sesame + urd (8:2) inter cropping over used rest intercropping during both the years, respectively. The intercropping of sesame + urd (8:2) were found significantly higher quality parameters viz., protein and oil content over sesame + maize (4:1), sesame + maize (8:2) and sesame + urd (4:1) intensively during both the years, respectively. The hand weeding practice was significantly reduced weed populations, over chemical weed management practices as pre-emergence of Pendimethaline and early post emergence of Alachlor, respectively during both years. The response of weed management practices was significantly noted in hand weeding practice in respect to grain yield of main crop (sesame) and sub crop (Maize and urd) over applied chemical weedicides as pendimethaline and Alachlor during both the years, respectively. The monetary advantages viz., system of productivity and profitability and quality aspects viz, protein and oil content with hand weeding practice were significantly more than applied both chemical control of pendimethaline and Alachlors in both the years, respectively. Therefore, inter cropping sesame + ured (8:2) with hard weeding practice may be recommended in respect to all weed populations reduced more produced grain yield of main and sub crop monetary advantages and quality aspects.

**Keywords:** Weed management, Crops, *Kharif*, Treatment

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