

## STUDIES ON DUAL PURPOSE SPINELESS SAFFLOWER (*CARTHAMUS TINCTORIUS* L.)

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### ABSTRACT

In Madhya Pradesh safflower (*Carthamus tinctorius* L.) cultivation could not get flourished due to its spiny nature. The All India Coordinated Research Project on Safflower, College of Agriculture, Indore Developed spineless variety JSI-7. It was expected that now safflower cultivation would reach to farmer field but it did not, because farmers are still harvesting only speed from the spineless crop. The spineless variety JSI-7 was small seeded and low yielder than spiny. Now newly developed spineless are bold seeded, short stature and good yielder of seeds and dry petal. Farmers could be harvest two economic product, seed for oil and dry petals for nature colour and herbal medicine.

**Keywords :** Safflower, spineless, spiny, dry petals.

The development of spineless safflower variety is the need of hour of non-traditional area. Non traditional central India including Madhya Pradesh is characterized by excessive vegetative growth which aggravates the problem of spines, aphid infestation and difficulty in harvesting (Sawant *et al.*, 2000). The plant type has been improved to considerable extent with the release of spineless safflower variety JSI-7 and JSI-73 but still there is a considerable scope for further improvement for dual purpose spineless safflower. Farmers will be harvest safflower seed and dry petals from one crop in one season.

The study was conducted at AICRP Safflower, College of Agriculture, Indore. The experimental material was the eleven recently developed improved spineless varieties with two checks JSI-7 and JSI-73, were tested in Randomized Block Design during three seasons from 1998-2000. The characters were recoded on 100 seed weight (g), days to 50% flowering, days to maturity, plant height (cm), number of capitula per plant, number of seeds/capitulum, number of branches/plant, seed yield and dry petals yield. Petals were collected at the time of physiological

maturity of crop so seed formation would not be affected.

The results indicated that two spineless checks JSI- 7 and JSI-73 were small seeded and low yielder than other spineless varieties except JSI-111 and JSI-109. While JSI-109 was extra early maturing very short statured spineless variety (Sawant and Saxena, 1997). The spineless variety JSI-97 showed highest seed yield, dry petal yield, short stature, and bold seeds (Sawant *et al.*, 1998). The varieties JSI-103 and JSI-104 were at par. All these entries were less succulent and hardy type than checks. In case of earliness the short statured extra early dwarf variety JSI-109 had 61 cm plant height and matured in 118 days with seed and dry petal yield 1164 kg and 57 kg/ha, respectively. The initial growth of the variety JSI- 109 was very fast, the sluggish rosette stage was terminated only in 15 days in spite of 25-30 days.

For the 100 seed weight the varieties JSI-97, JSI-111, JSI-113 and JSI-103 were recorded more than six 6.0g inspite of checks had only 4.0 and 4.2 g

In India safflower cultivated as rainfed originally for its florets and minor oil seed crop (Prasad *et al.*, 1993). For dry petal yield the variety JSI-97 and JSI-103 and JSI-104 were recorded

more than 70 kg/ha Safflower petals have tremendous potential for value addition such as a safflower tea, food colour, and textile colour needs to be developed in the public research system.

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