



Research Note

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Effect of chemicals and insecticides on defoliation in pomegranate (*Punica granatum* L.) cv. KESAR

■ M.K. SHEIKH

Address for Correspondence

M.K.SHEIKH
 Department of Horticulture, College
 of Agriculture, BIJAPUR
 (KARNATAKA) INDIA
 Email : dr_mksheikh@yahoo.co.in

ABSTRACT : A field experiment was conducted on defoliation of pomegranate in pomegranate variety kesar on farmers field in Jumnal village, Dist. Bijapur Karnataka state. In pomegranate defoliation by ethopan 39 per cent SL which helps in translocation back of the nutrient to the branches by means of senescence. The other chemicals like thiourea, insecticides like metacid and profenophos are also under use by the pomegranate growers by mean of formation of abscisic layer. The ethopan 39 per cent SL was used at a concentration of 1000 ppm, where as thiourea alone 3 g/ liter, ethrel 39 per cent SL 1ml + thiourea 3g + 2g DAP/litre, metacid 2ml /litre, profenophos 2ml/litre for defoliation purpose in pomegranate. The defoliation of pomegranate was effective with ethrel 1000ppm as compared to metacid 2ml/litre and profenophos 2ml per litre of water, urea phosphate 5g/litre.

KEY WORDS : Insecticides, Ethopan, Profenophos, Thio urea, Metacid, Urea Phosphate, Pomegranate

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Pomegranate (*Punica granatum* L.) flowers through out the year in three district season called Mrigbahar (June-July), Hastabhar (Sept.-Oct.) Ambebhar (Jan. -Feb.), if all the flowers are allowed to set fruits then fruits will not mature at a time. To induce flowering in one particular season of farmers choice looking to his water availability, demand in market, by using Ethopan 39 per cent SL (Ethrel), Thio urea, profenophos. Metacid, urea phosphate for defoliation by spraying these chemicals after 45 days rest, which is essential

for storage of carbohydrate and nitrate in plants in 14:1 proportion, that helps in flowering, further to induce flowering if pomegranate plants are not flowering after defoliation then 13:0:45 that is potassium nitrate 3gm/litre of water helps in induction of flowering.

A field trial was conducted on farmer field in Jumnal during the year 2009-10, on 5 year old pomegranate plants variety Kesar by spraying Ethrel 1000ppm, profenophos 2ml/litre, Metacid 2ml/litre, Ethrel 1ml/litre + Thio urea 3 g +DAP 2g per

Table 1 : Effect of ethopan, metacid, urea phosphate, profenophos, thiourea on defoliation in pomegranate variety Kesar (Bhagwa)

Sr. No.	Treatments	Defoliation % after 21 days			
		R-I	R-II	R-III	Mean
1.	Ethopan 39% SL 1000 ppm (2.5ml/litre)	95	93	94	94
2.	Profenophos 2 ml/litre	65	64	63	64
3.	Metacid 2ml/litre	70	72	73	71.66
4.	Thio urea 3g/litre	75	70	69	71.33
5.	Ethopan 1ml + Thiourea 3g +DAP 2g/litre	80	85	88	84.33
6.	Urea phosphate 5g/litre	65	77	80	74
7.	Control (Water spray)	5	4	3	4
	Mean	65	66.42	67.14	66.18
	C.D. (P=0.05) =	6.76			
	S.E.± =	2.19			

litre, Thiourea 3gm/litre, urea phosphate 5g/litre, control (water spray).

The observations were recorded after 21 days of spraying the various chemicals and analysed statistically.

Ethopan 1000 ppm (94%) profenophos (64%) Metacid (73%), Thio urea (71.33%), Urea phosphate (74%) caused significant defoliation in pomegranate after 7 days except the control *i.e.* water spray. They are in conformity with findings of Chandra *et al.* (2011) the defoliation by Ethopan 39% and profenophos.

In general the defoliation starts after 72 hours of spraying. The growth initiation was noticed after defoliation with chemicals like Ethopan 39% SL, Thiourea, Urea phosphate

followed by insecticide like profenophos, Metacid. The new growth in water spray (control) was negligible.

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