

Profitable intercrops – In Niger

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(Accepted : May, 2006)

A field study was conducted during 2002 and 2003 on a sandy loam soil to study the profitable niger intercropping system for tribal areas of Satpura plateau zone for M.P. significantly net returns of Rs. 29522 / ha was recorded with the sole crop of castor. Combinations of niger + castor (2:2) intercropping gave highest niger equivalent yield of 19.20 qt./ha, net returns of Rs. 27170/ ha and B:C ratio 4.67.

Key words : Niger.

Niger (*Guizotia abyssinica* L.F. coss) is a minor oilseed crop. It is generally grown as mixed crop with small millets and some part of Satpura Plateau under triblas areas farmers grown as sole crop. Due to abettant weather conditions in M.P. suitable intercropping system can be more efficient practice of farming to maximize the production and net returns. Hence the present investigation was undertaken to study the suitable and profitable niger intercropping system for the Satpura Plateau zone.

Field experiment was conducted at Zonal Agricultural research Station Chhindwara (M.P.) for two years during rainy season for 2002 and 2003. The soil of the experimental field was sandy loam with 7.0 pH having low in available N(234 kg/ha) available P_2O_5 (17 kg/ha) and high in available K_2O_5 (598 kg/ha) contet. The treatments consisting to three sole cropping and two intercropping system. Viz,

intercropping of niger in cowpea and castor viz 2 :2 rou proportion at 30 cm apart were tested in randomized block design with three replications. A uniform fertilizer does of 20 KgN+ 20 K₂O + 10KgK₂O ha was given to all treatments at the time of sowing. Crop varieties were CSH-1, Pusa Barsati, and Kranti for niger, cowpea and castor respectively.

Niger equivalent and NMR Intercropping combination niger + castor (2:2) intercropping gave highest 27170 equivalent yield of 19.20 Q/ha. Ner return of Rs. 27170/ha and B:C ration 4.67 However significantly net returns of Rs. 29552/ha was recorded with the sole crop of castor (table 1) Sole niger significantly superior to sole cowpea in monitory advantages. Seed yield of niger reduced in all intercropping system over its pure stand during each year but the reduction was maximum when it was intercropped with cowpea (table1) Similar findings were also report by

Table 1 : Grain yield and niger equivalent in niger based intercropping system

Inter cropping system	Grain yield (Q/Ha) 2002		Grain yield (Q/ha)		Niger equivalent		Mean
Niger	4.90	-	5.33	-	4.90	5.33	5.11
Cow pea	-	4.20	-	4.76	3.73	4.23	3.98
Castor	-	20.31	-	22.88	19.18	21.60	20.39
Niger + cowpea (2:2)	2.4	2.8	20.77	2.61	4.88	5.09	4.98
Niger + castor (2:2)	2.65	18.96	2.54	19.30	17.65	20.76	19.20
CD at 5 %					1.26	1.11	
Price (Rs/Qt) 2002-2003	Niger – 1800 Cow pea, 1000				Castor , 1700		

Table 2 : Economics of niger based intercropping system.

S.No.		GNR	NMR	B:C Ratio
1	N Sole	9198	6288	3.16
2	Cow Pea Sole	7164	4164	2.38
3	Castor Sole	36702	29552	5.13
4	Niger + Cow Pea (2:2)	8964	6090	3.11
5	Niger +	34560	27170	4.67
6	Castor (2:2) at 5 %	915	915	

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