

Performance of Pigeon pea based intercropping Systems in Rainfed Situation of Scarce Rainfall Zone of Kurnool district, A.P.

Introduction:

In Kurnool district Pigeon pea is being cultivated in an area of 45,000 ha and yields are limited by the amount and distribution of rainfall during monsoon period. Pigeon pea is a late maturing, tall growing, wide spaced crop with deep root system can accommodate rapidly growing, short duration and short statured crops like millets and Short duration pulses would prove to be a viable intercropping system

Problem identified: Adverse weather conditions like delay onset of rains and prolonged dry spells during the crop period is very common in rainfed situation. Such situation results in economic losses to the farmers due to partial or total failure of the sole crops.

Intervention: To develop climate resilient alternative crop management systems and to ensure against crop failure due to drought during crop growth, Different Redgram based intercropping systems were assessed under rainfed situation ie T1: Redgram + Greengram (1:5) , T2:Redgram + Blackgram(1:5) , T3:Redgram + Blackgram(1:5) and T4: Redgram (Sole)

Title: Assessment of Pigeon pea based intercropping Systems in rainfed situation

Mean Yield and Economic Returns of Redgram based for the last three years-2016-18

Treatments	Yield (Kg/ha)		LER	Gross returns (Rs/ha)	Redgram Equivalent yield (kg/ha)
	Redgram	Inter crop			
Redram+ Greengram	876	411	1.50	24360	1263
Redgram+ Blackgram	854	333	1.40	19786	1198
Redgram+ Setaria	840	1117	1.67	26826	1244
Redgram	986	-	-	18972	986

Result :

The results indicated that, growing of Redgram as sole crop recorded higher grain yield (986kg ha⁻¹) over Redgram in intercropping system. Among the cropping systems, intercropping of Greengram, setaria and Blackgram with pigeonpea resulted in maximum pigeonpea equivalent yield (1263 kg ha⁻¹), 1244 and 1198 kg ha⁻¹) over other intercropping system and sole pigeonpea. The LER is high with Pigeonpea + Setaia intercropping system compared to inter cropping systems Ahmad and prasad (1996) also reported higher LER with little millet + Pigeonpea intercropping system.

Out come: Intercropping of Redgram with Greengram and setaria in 1:5 row proportion resulted in the highest LER value of 1.24 coupled with highest yield of Redgram equivalent Yield. This practice was taken well by farmers of Kurnool district. Awareness on different Redgram based inter cropping systems was created and nearly 30 % of rainfed farmers were adopting the intercropping systems.