MFC-09-1: A New Forage Cowpea (*Vigna unguiculata* (L.) Walp) Variety for South Zone of India

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Introduction

Cowpea (*Vigna unguiculata* (L.) Walp) is a leguminous crop grown throughout West Africa, often in association with pearl millet and sorghum. Cowpea is well adapted to the harsh growing conditions, including low soil fertility, high temperatures, and drought. Cowpea can fix atmospheric nitrogen to improve soil fertility and cropping system productivity. Additionally, farmers feed cowpea fodder to livestock to increase income, and collect the manure produced for use in their fields thereby reduces farmers' reliance on commercial fertilizers and sustains soil fertility. Previous studies with cowpea indicated that this legume improves soil fertility and enhances the intake and utilization of poor quality roughage consequently improving livestock production and productivity.

Materials and Methods

A field experiment was conducted during kharif season of 2013 in South Zone centres of India, *viz*, Coimbatore, Vellayani, Mandya, Hyderabad, Dharwad, to study performance of forage Cowpea genotype MFC-09-1. The experiment consisted of 05 treatments combinations of different cowpea genotypes *viz*., T_1- MFC-09-1, T_2- RR-3, T_3- BL-1 (NC), T_4- UPC-5286 (NC) T_5- UPC-9202 ZC (CZ-SZ) at 05 locations in South Zone of the country. The experiment was laid out in randomized complete block design and replicated thrice.

Results and Discussion

Results revealed that, the entry MFC-09-1 recorded significantly higher GFY (246.9 q/ha) and DMY (42.5 q/ha) which was 14.2% higher GFY and 19.4 % DMY in south zone. Whereas at national level again entry MFC-09-1 ranked first with 1.4 percent superiority in terms of GFY. The entry MFC-09-1 with 4.9% superiority in DMY was adjudged best performer at national level.

Table 1: Green forage yield (q/ha) of forage cowpea

Entries	**South zone**								**All India**		
	Coim-batore	**Vella-yani**	**Mandy a**	**Hyder-abad**	**Dhar-wad**	**Mean**	**Ran k**	**Super -iority %**	**Mea n**	**Ran k**	**Super-iority %**
MFC-09-1	252.1	290	271.6	204.1	216.7	246.9	1	14.2	248.8	1	1.4
RR-3	210.4	253.8	239.2	183.3	185.4	214.4	3		239	3	
BL-1 (NC)	229.2	270	192.8	137.4	181.3	202.1	5		222.9	4	
UPC-5286 (NC)	216.7	275	226.6	162.4	164.6	209	4		245.3	2	
UPC-9202 ZC (CZ-SZ)	231.2	255	226.3	202	166.7	216.2	2				
Mean	**227.9**	**268.8**	**231.3**	**177.8**	**182.9**	**217.7**			**239**		
CD at 5%	14.4	21.8	21.6	28.3	30.6						
CV%	5.8	5.3	6.3	10.3	10.9						

Table 2: Dry Matter Yield (q/ha) of forage cowpea

Entries	South Zone								All India		
	Coim batore	**Vella yani**	**Man dya**	**Hyder abad**	**Dhar wad**	**Mean**	**Rank**	**Super-iority%**	**Mean**	**Rank**	**Super-iority%**
MFC-09-1	46.1	41.4	52.1	24.6	48.2	42.5	1	19.4	45.3	1	4.9
RR-3	31.8	36.3	45.2	24.4	38.7	35.3	3		45	2	4.2
BL-1 (NC)	38.2	38.6	44.2	17.6	35.2	34.8	4		41.3	4	
UPC-5286 (NC)	34.9	39.3	39.3	19.9	34.7	33.6	5		43.2	3	
UPC-9202 ZC (CZ-SZ)	40.3	36.4	39.5	27.4	34.6	35.6	2	2.3			
Mean	**38.3**	**38.4**	**44.1**	**22.8**	**38.3**	**36.4**			**43.7**		
CD at 5%	3.5	3.1	4.4	5	7.4						
CV%	8.5	5.3	6.7	14.3	12.6						

Conclusion

Based on the results it can be inferred that, the forage Cowpea variety MFC-09-1 developed at Mandya centre by crossing KBC-2 X CoFC-8 can be recommended for cultivation in farmers field for southern parts of India, which recorded higher GFY (246.9 q/ha) and DMY (42.5 q/ha) over national checks.

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