1.	Experiment No. and Title			No. and Title	:	19.2.3.69 RESPONSE OF FODDER SORGHUM TO					
						CUTTING AND NITROGEN					
						MANAGEMENT UNDER SOUTH					
						GUJARAT CONDITION.					
2.	Bud	get H	lea	ad	:	12038					
3.	Collaborative department if			ve department if		NA					
	any										
4.	Background information										
	Live	stoc	ck i	s very important par	t c	of our rural economy. India rank first among					
the major livestock population of the world. The low productivity of Indian livestock is											
Guiar	mainly due to chronic shortage of feed and fodder coupled with poor quality. In										
crops	is or	1000	8 r	nhie 64% of the tot	. . - al	cultivated area. The total annual production					
of for	of forage is only 20 MT against requirement of 49.2 MT Fodder sorabum is one of										
the m	the most widely adopted fodder crop. It can be fed as areen and drv fodder or										
conse	conserved into silage especially for lean period. Due to its excellent growing habit,										
high y	the stepsiling of the stepsili										
count	ry. T	he r	ma	in constraints of lo	W	production of forage sorghum are poor					
mana	geme	ent p	rac	ctices and less avail		bility of improved seed of fodder sorgnum.					
5		g uie	= al		, u .						
5.	1		tur	ly the effect of cuttin	na	and nitrogen management on growth and					
	••	vield	of	fodder sorahum	ing	and hitrogen management on growin and					
	2.	To fi	nd	out the effect of cutti	out the effect of cutting and nitrogen management on NPK content						
		and	upt	iptake by fodder sorghum							
	3.	To d	ete	ermine the effect of o	cut	tting and nitrogen management on available					
		NPK	in	soil after harvest	1						
6.	Prin	cipal	lin	vestigator and	:	: 1. Dr.R.M.Pankhaniya (PI)					
	asso	ociat	es			2. Dr.B.B. Landel (Co-PI)					
						A Dr V P Usadadia (Associate)					
7.		ation	8	Agro climatic sub-	•	Department of Agronomy NMCA NAU					
	reai	on			-	Navsari.South Gujarat heavy rainfall agro					
						climatic zone					
8.	Year	r and	S	eason	:	Rabi 2023-24					
9.	Crop	o and	V k	ariety	:	Fodder Sorghum, CSV-46F(Tapi Chari)					
10.	Expe	erime	ent	al details	-						
	(a) Treatments										
	Α	Cutt	utting management								
		C ₁	:	No cut (Seed production)							
		C ₂	:	1-cut and left for see	ed						
	C ₃ : 2-cut (Fodder production)										
	В	B Nitrogen levels									
		<u>N</u> 1		80 kg/ha (40 kg/ha a	as	basal and 40 kg/ha at 30 DAS)					
		N ₂	E	100 kg/na (50 kg/ha		s basal and 50 kg/ha at 30 DAS)					
	Net	IN3	:	120 kg/ha (60 kg/ha		s pasai and bu kg/na at 30 DAS)					
Note		e	:	1.00 mmon application of 40 kg/na P_2O_5 for each treatments as							

	basal							
	2.Additional application of $\frac{1}{2}$ dose of N for treatment C ₂ a							
		C ₃ atterfirst cut						
	(h)	S. Fouder crop is ha	<u>.</u>	rvested after 50% flowering.				
	(d)	Experimental Design	<u> -</u>					
	(C)		-					
	(a)	Plot size	Ë	Gross : 5.00 m x 4.5 m Net : 4.00 m x 2.70 m				
	(e) Spacing		:	30 cm between two rows for C_3 and 45X10 cm for C_1 and C_2				
	(f)	Seed rate (kg/ha)	:	60 kg/ha for C ₃ and30 kg/ha for C ₁ and C ₂				
	(g)	Fertilizer dose	:	As per the treatment				
	(h)	Any other details		-				
11.	Observations to be recorded							
	1.Pl	ant population at 20DAS and	1 a	t harvest				
	AG	rowth and yield attributes	wth and yield attributes					
	2. P	Plant height at harvest (cm)						
	3. N	3. No. of leaves per plant						
	4. Dry matter after harvest (g/Plant)							
	B. Y	B. Yields						
	5. S	. Seed yield (kg/ha)						
	6.G	6.Green fodder yield (q/ha)						
	7. Dry fodder yield (q/ha)8. Seed equivalent yield (kg/ha)							
	 C. Chemical and quality analysis 6. NPK content and uptake by plant 7. Crude protein content (%) 8. Crude fibre content (%) 							
	D. A	D. Available N, P and K in soil after harvest						
12.	Met	hodology (If necessary) : -						

	R-I	R-II 18.0 m	R-III
Î	C 3N3	C 2N3	C3N1
	C2N1	C3N1	C3N3
	C1N3	C1N1	C1N2
	C 1N1	C2N2	C2N1
48.5 m	C2N2	C2N1	C 1N3
	C2N3	C3N2	C 2N2
	C3N2	C3N3	C1N1
	C3N1	C1N2	C2N3
	C1N2	C1N3	C3N2

Exp. No. 19.2.3.69 Title: Response of fodder sorghum to cutting and nitrogen management under south Gujarat condition