



## PERFORMANCE EVALUATION AND ADAPTATION OF LENTIL VARIETIES IN LEMU, GUMUR AND DAMOT GALE DISTRICTS OF SOUTHERN ETHIOPIA

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### ABSTRACT

*This study was conducted on stations and on farm in three districts of South region, Ethiopia, to evaluate the lentil varieties for yield and adaptation, assess farmer's preferences during 2004/05 Meher Season. Data on plant height, hundred seed weight, pod per plant, days to flowering, days to maturity and grain yield were collected. Six lentil varieties which included five released and one local check of respective locations were planted on 3.2m<sup>2</sup> plots at spacing of 20cm\* 2cm. The plots consisted of four rows which were four meters long for on-centre and on farm trials. The trials were laid in randomized complete block design with four replications. Twelve farmers from three districts of four farmers at each village were participated in executing on farm trials. Each farmer was a replicate for on farm component. There were significant differences among varieties for grain yield and some of traits. The results for the on-centre and on farm trials indicated that there were significant yield differences between the local check and the released varieties at two stations and three districts. The varieties Teshale and Alemaya were superior yielded overall to the local check across three villages 'and on stations. Thus, Alemaya and Teshale out yielded other varieties and had average yields of 1239.1 kg/ha and 1193.8 kg/ha at on station and 1165.1 kg/ha and 1202kg/ha at on farm trials, respectively. Combined statistical analysis and farmers assessments identified two genotypes (Teshale and Alemaya) as potential varieties for production in south Ethiopia. Therefore, based on researchers and farmers' preference, varieties Teshale and Alemaya are recommended for production in Lemu, Gumur and Damot Gale districts and similar agro ecologies of south Ethiopia.*

**Keywords:**

### 1. INTRODUCTION

*Lens culinaris*

## **2. MATERIALS AND METHODS**

**On-Station.**





#### **4. CONCLUSION**

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Table-1.

Lentil varieties	HSW (gm)			PH (cm)			PP			FD			MD		
	H	F	X	H	F	X	H	F	X	H	F	X	H	F	X
Alemaya	3.2ab	2.9a	3.1	38.3bc	27.5b	32.9	44.ab	37.5ab	40.8	44.5a	50.5a	47.5	110a	117a	113.5
Chekol	2.2c	2.6b	2.4	41.3a	27.3bc	34.3	45ab	35.5bcd	40.3	44a	51.5a	47.8	93.5c	98.5b	96
Ada	2.2c	1.8c	2.0	40.3ab	30.3a	35.3	40.8b	32.75cd	36.8	44.3a	50.3a	47.3	106.8ab	111.75a	109.3
Teshale	3.4a	2.9a	3.2	39.5abc	30.3a	34.9	41.5b	32d	36.8	45.5a	51.5a	48.4	111a	114a	112.5
Alem Tena	3.0b	1.8c	2.4	37.3cd	31.3a	34.3	43.5ab	37abc	40.3	45.5a	50a	47.8	108.3a	113.25a	110.8
Local	2.2c	1.8c	2.0	35d	25c	30	48.25a	40.25a	44.3	40.5a	46.5b	43.5	99.5bc	104.5b	102
GM	2.7	2.3		38.6	28.6		43.83	35.83		44.04	50.04		104.8	109.83	
Cv	6.7	8.3		4.7	5.74		7.32	8.15		8.69	4.61		5.03	4.19	
LSD (5%)	0.27	0.28		2.7	2.48		4.84	4.4		5.77	3.48		7.94	6.93	

Table-2.

Lentil varieties	Yield(kg/ha) of on station trials				Yield(kg/ha) of on farm trials			Mean	Y.A
	Hossana	Freeze	Mean	Y.A	Wandara	Idiget	Bobicho		

Note:-

Table-3.

Lentil varieties	HY	PS	EM	SZ	SC	SD	SN	PN	TS	Total	Rank

Key:

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