

밀, 호밀, 보리의 사초 수량성

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Study on Productivity among Wheat, Barley and Rye for Forage

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연구목적

남부지방에서 밀, 호밀, 보리의 사초 생산량을 비교 검토코자 시험하였다.

재료 및 방법

가. 공시품종 : 밀 - Urimil, Geurumil

호밀 - Paldanghomil, Chilbohomil

보리 - Olbori, Gangbori

나. 파종기 : 10월 20일, 파종량 15kg/10a

다. 시비량(kg/10a) : N-P₂O₅-K₂O = 12-10-8

라. 시험구배치법 : 분할구배치 3반복

마. 수량조사 : 출수기, 초장, 생초중 등 통계분석 : 유전분산, 환경분산, 유전력 등

결과 및 고찰

To select the most suitable crop and variety of forage for productivity at the southern part of Korea, the crops of wheat, barley and rye were grown from Oct. 1999 to June 2000.

Paldanghomil variety of rye crop was shown to have the highest productivity in comparison to other varieties of crops used in this experiment.

It showed relatively high plant height, number of tiller, forage yield and dry matter yield. Therefore, it was concluded that Paldanghomil of rye crop was the most suitable variety with high yield in the southern part of Korea. The heritabilities of all characters were estimated to be high.

Table 1. Genotypic variances (σ^2G), environmental variances (σ^2E), heritability(h^2), and of analysis of variance in yield.

Yield	σ^2G	σ^2E	h^2	Variance	
				Variety	Error
Forage	4781.07	837.25	68.81	12286.870**	831.58
Dry matter	427.36	24.69	93.34	1124.224**	24.69

Table 2. Heading, plant height, number of tiller per m^2 and ratio of leaf dry weight to total dry weight(LW/TWX100) of six varieties in crops.

Corps	Variety	Heading and Harvesting date	Plant height(cm)	No. of tiller(m^2)	Lw/Tw \times 100(%)
Wheat	Urimil	May 14	114	431	31
	Geurumil	May 16	111	420	36
Barley	Olbori	May 10	98	358	23
	Gangbori	May 12	96	347	28
Rye	Paldanghomil	May 2	128	487	12
	Chilbohomil	May 4	125	465	13

Table 3. Genotypic variances (σ^2G), environmental variances (σ^2E), heritability(h^2), and of analysis of variance in observed characters.

Character	σ^2G	σ^2E	h^2	Variance	
				Variety	Error
Heading date	3.42	0.27	90.44	5.74**	0.442
Plant height (cm)	18.83	0.45	93.13	66.21**	0.735
No. of tiller (m^2)	74.27	0.79	91.75	79.79**	0.824
Lw/Tw \times 100(%)	12.11	0.41	90.42	30.11**	0.696

** : significance at 1%

* : significance at 5%

Table 4. Forage yield of the varieties in wheat, barley and rye.

Yield	Wheat		Barley		Rye	
	Var.	Var.	Var.	Var.	Var.	Var.
	Urimil	Geurumil	Olbori	Gangbori	Paldanghomil	Chilbohomil
Forage yield	2.104	1.934	1.745	1.626	2.325	2.217
Dry matter yield	521	516	437	415	564	547

(kg/10a)