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RYE AND TRITICALE FORAGE YIELDS AT OVERTON FOR 1990-91 AND 3-YEAR MEANS

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Background. Rye is an important winter annual forage crop in East Texas. Rye will produce more forage during December and January than the other small grain crops. Rye is also more winterhardy than wheat, oats, or ryegrass. There are significant differences between varieties for seasonal and total forage yield. Triticale is a cross between wheat and rye which offers good forage potential. Some varieties produce most of their forage yield in the fall, while others produce a more balanced forage yield throughout the growing season. Growers should be aware of forage yield potential when selecting which varieties seed they will purchase each fall.

Research Findings. A rye and triticale forage variety test is conducted annually at Overton. All available commercial and experimental rye and triticale varieties were evaluated during the past 3 years. Fertilizer application rates and dates are noted on Table 1. Tests were planted into a prepared seedbed. Planting dates were early September normally, however, in 1990 the planting date was September 14. Seed were drilled into a prepared seedbed at an 1 inch depth at 92 lbs/ac. Plot size was 4 x 12 ft with four replications. The entire plots were harvested with a Hege plot harvester at a height of 2 inches on November 2, November 29, February 22, and March 1.

The rye forage was approximately 10 inches tall at the first harvest on November 2. The variety demonstrating best seedling vigor and rapid fall growth was FLA 401, which was significantly better than all other varieties. The second harvest four weeks later provided an indication of rapid fall regrowth. FLA 201 triticale produced the highest yield, however, most other entries were not significantly different. A hard freeze on December 29 caused severe winterkilling on several entries which stopped or reduced any further forage production on those lines. On the February 26 harvest, experimental AR 0021 produced the top yield. On the last harvest on March 1, the top yield was produced by experimental Noble Foundation 14. A mixture of Bonel rye and TAM 90 ryegrass provided the most total forage. This mixture resulted in good fall forage production and good spring forage production. In fact, a later harvest in April and May would have increased the total yield further. The top yielding entry was NF 14, followed by AR 0021, Bonel, and Baton. Differences in yield between entries of less than the LSD (note under each column) may be due to experimental error and should not be considered significant.

Application. Data presented from these experiments should be useful in selecting rye varieties for your farm. Depending on variety availability, compare forage yields, winterkilling damage, and seed prices to determine which variety you want to plant. Rye-ryegrass mixtures are more productive than rye alone.

Table 1. Rye and triticale forage production test in 1990-91 and 3 year average at TAMU Agricultural Research and Extension Center at Overton

Variety	Harvest Dates				Total Yield	3-Yr Means	Winterkill
	Nov 2	Nov 29	Feb 26	Mar 1			
	-----lbs dry matter/acre-----						%
M-R-RG ^a	1695	1207*	1838	3801**	8541**	--	7
NF 14	1509	1242*	1405	3263*	7419	5521	5
AR 0021	1739	1249*	2295**	1689	6972	--	50
Bonel	1356	1264*	1739	1816	6175	5005	10
Maton	1117	821	1630	2452	6020	4979	2
Wintergrazer 70	1223	989	1557	2165	5934	--	10
NF 73	1739	1047*	1580	1466	5832	5118	15
Elbon	1587	1067*	1798	865	5317	4630	1
M-RWO ^b	1328	1122*	1010	1377	4837	--	60
NF 185	1522	1120*	1152	994	4788	4196	5
FLA 402	1287	1029*	626	910	3852	3756	95
FLA 401	3412**	224	0	0	3636	3612	100
NF 21 (Triticale)	1588	1294*	63	439	3384	3129	99
FLA 201 (Triticale)	1824	1298**	0	0	3122	2189	100
Sunland	1591	1266*	0	0	2857	--	100
Mean	1634	1082*	1340	1820	5246		
LSD (0.10)	419	285	363	948	1020		

^a Mixture of 92 lbs/a Bonel rye and 16 lbs/a of TAM 90 ryegrass.

^b Mixture of 41 lbs/a Elbon rye, 41 lbs/a Florida 302 wheat and 39 lbs/a of H-833 oats.

**Highest yielding entry for that harvest date.

*Not significantly different from ** based on LSD at 10% level of probability.

Planted September 14, 1990.

Fertilization: Preplant 91 lbs of N, P₂O₅ and K₂O/acre and 84 lbs of sulfur/acre. Topdressed with 50 lbs/acre of actual N on Nov. 29 and Feb. 7, applied as ammonium nitrate.