SOUTH DAKOTA– Winter Forage Trial at Southeast Research Farm

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With the consideration that livestock producers may need to use more tillable acres to meet growing forage demands, a winter annual forage trial was established at the Southeast Research Farm near Beresford, SD, in 2019. Winter annuals used for forage can offer a double-cropping opportunity with soybeans or warm-season forages and can use up residual N in the fall and protect soils. Several varieties of hybrid rye, open-pollinated (OP) rye, triticale, and winter wheat were no-till drilled into oat stubble on September 27, 2019. Plots were managed for ideal forage production per university recommendations for pests and soil fertility. Quality measurements, plant height, and growth stage were recorded on May 27. Plots were harvested on May 27 and 28 when plants ranged from Feeke's 9 to 10.5. In summary, rye had significantly higher yields per acre over all other crops. The top-yielding group consisted of hybrid and OP rye lines ranging 3.90-4.51 ton/ac on a dry matter basis. The best OP line was Hazlet, and it yielded as well as several hybrid rye lines. The OP rye is more cost efficient when compared to hybrid lines in this particular situation. Rye can serve as an excellent way to supplement forage options on the farm while maintaining good feed quality.

Table 1. Rye forage variety trial - including hybrid lines - Southeast Research Farm, 2020 season.

Line	Type	Feeke's Stage	DM Yield	Hay Yield	Silage Yield
			(tons/ac)		
Bono	rye - hybrid	10.45	**4.51**	**5.31**	**12.89**
Hazlet	rye - OP	10.50	**4.23**	**4.98**	**12.10**
Propower	rye - hybrid	10.45	**4.06**	**4.77**	**11.60**
Elbon	rye - OP	10.51	**3.94**	**4.63**	**11.25**
Berado	rye - hybrid	10.50	**3.90**	**4.59**	**11.15**
Tayo	rye - hybrid	10.45	3.69	4.34	10.54
Brasetto	rye - hybrid	10.50	3.60	4.24	10.30
Progas	rye - hybrid	10.50	3.47	4.08	9.91
Serafino	rye - hybrid	10.45	3.47	4.08	9.90
Lon	rye - OP	10.35	3.39	3.99	9.70
Guardian	rye - OP	10.45	3.26	3.83	9.31
Daniello	rye - hybrid	10.50	3.22	3.79	9.20
Fridge	triticale	10.45	3.10	3.64	8.85
Rymin	rye - OP	10.45	3.09	3.64	8.84
718 trical	triticale	9.50	3.09	3.63	8.83
Nitrous	triticale	9.50	2.95	3.47	8.42
rymin8	rye - OP	10.35	2.61	3.08	7.47
nitrous8	triticale	9.00	2.57	3.02	7.34
sy-912	wheat	9.75	2.53	2.97	7.22
HyOctane	triticale	9.00	2.06	2.43	5.90
Mean		*10.18*	*3.34*	*3.93*	*9.53*
CV (%)		---	*13.40*	*13.40*	*13.40*
LSD (0.10)		---	*0.77*	*0.91*	*2.20*

Note that for forage production, the best OP line ('Hazlet') was as good as the hybrid lines.

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