



Texas Agricultural Extension Service
The Texas A&M University System

Result Demonstration Report

Traweek Farm Small Grains Variety Trial

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SUMMARY: Twelve different varieties of small grain were compared for tonnage and quality during the 2000-2001 growing season. Due to severe drought and poor growing conditions, abandoning the demonstration was considered. However, one harvest was made in early March. The yields were much lower than normal, and after evaluating the stands, no further harvests were made. Yields on the twelve varieties ranged from less than 200 pounds per acre at 35%DM to over 4,000 pounds per acre. As in years past the Elbon rye was the highest tonnage, but was the lowest quality, as determined by percent acid detergent fiber (ADF) and crude protein (CP).

OBJECTIVE: To evaluate twelve varieties of small grain, including rye, wheat, triticale, oats, and ryegrass for total yield and nutritional quality.

MATERIALS AND METHODS: One rye variety, four wheat varieties, two triticale varieties, two oat varieties, and three ryegrass varieties were planted on the Traweek farm on November 5, 1999 with a 12' drill. The land had been fertilized and prepared for planting, even though soil moisture was very short. All the small grains were planted at 100 pounds per acre, with the exception of ryegrass, which was planted at 40 pounds per acre. The plots were evaluated and hand harvested on March 6, 2000. Moisture percent and tonnage were determined and samples were collected and taken to the lab for quality analysis.

RESULTS AND DISCUSSIONS: As already mentioned, conditions were less than ideal during the growing season. The crop was planted later than normal, and yields were much less than in other years. Still, there was a wide range in yield per acre as shown in Table 1. The Elbon rye yielded 4,187 pounds per acre at 35% DM. Several wheat, triticale, and oat varieties yielded a ton or more per acre. The ryegrass varieties yielded less, but in many years they will increase tonnage significantly later in the growing season.

Table 1. Yield results of small grain varieties.

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Variety	Harvest Moisture (%)	Yield/A (pounds @ 35% DM)
Elbon rye	72.3	4,187
Jagger wheat	70.1	3,538
VNS triticale	74.5	2,518
Tricale 2+2 triticale	77.5	2,423
Farm Boy oats	72.3	2,327
Lockett wheat	68.6	2,118
Stampede ryegrass	71.5	1,969
Walken oats	72.6	1,750
Rio ryegrass	74.3	1,482
Ribeye ryegrass	69.2	1,113
Coker 9663 wheat	73.1	379
Pal 3145 wheat	72.4	176

When the plots were evaluated on January 21, 2000, the Elbon rye showed the most growth, which is normal for most years. For the ryegrass varieties, Stampede showed the most growth, but was still less than most of the wheat, oat, and triticale varieties. On February 24, the plots were evaluated for grazing preference. It was noted that cows were grazing oats, followed by ryegrass, and then rye. The wheat and triticale varieties were being grazed the least.

Table 2 shows the analysis on each variety for percent ADF and percent crude protein. As can be seen, small grain varieties are an excellent quality crop that we can use for grazing green chop silage or hay. Still, some varieties show a higher quality than others. At harvest time on March 6, the rye was already heading and the triticale 2+2 was beginning to head. The triticale showed the highest percent crude protein of all varieties, with 30.5% crude protein.

Table 2. Quality analysis of small grain varieties.

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Variety	%ADF	% LIG	% CP
Elbon rye	23.5		18.4
Jagger wheat	21.1		19.2
VNS triticale	21.1		25.1
Tricale 2+2 triticale	19.9		30.5
Farm Boy oats	16.8		21.6
Lockett wheat	18.0		27.3
Stampede ryegrass	18.8		23.3
Walken oats	17.0		21.4
Rio ryegrass	18.7		21.8
Ribeye ryegrass	18.6		24.8
Coker 9663 wheat	17.3		25.4
Pal 3145 wheat	18.7		21.5

Due to the severe growing conditions, other varieties yielded less than normal. This trial does show how the varieties compared in less than ideal growing conditions, due to the severe drought. Additional trials will be conducted in the future to continue evaluating the varieties to help producers grow and utilize those that are of the best value and most profitable.

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