

DOUBLE CROPPING WITH CEREAL GRAIN FORAGES

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Corn silage producers have opportunities in Southern Michigan to double crop by planting cereal grains after corn silage, and harvesting the cereal grains the following spring for forage, prior to planting the next year's crop.

At the W.K. Kellogg Biological Station in Hickory Corners, MI, we tested five different cereal grain crops provided by Byron Seeds to evaluate forage quantity and quality, and assess the feasibility of fitting this crop in between two full season crops. Treatments were replicated four times in an RCBD design. Samples were composited across replications for forage analysis, which was completed by the MSU Forage Quality Laboratory (Dr. Kim Cassida). Details of the trial are listed in the green column to the right, and data for the forage crops is shown below.

Crop	Dry Matter Yield (lbs/A)	Crude Protein	ADF	aNDF	Lignin	Sugars
Wheat	2667	12.61	27.7	51.2	3.12	13.3
Triticale Plus	2938	11.32	30.1	55.8	3.98	11.7
Triticale	3149	11.15	30.0	56.7	3.58	11.9
Winter Barley	3247	11.31	30.1	58.3	3.53	11.1
Cereal Rye	3824	11.19	32.7	62.1	3.74	9.4
LSD P=.05	737					
CV	16.1					

Crop	WSC	IVTDM D48	dND F48	Ash	Fat	K
Wheat	20.0	80.0	34.3	7.9	2.90	2.15
Triticale Plus	16.4	77.9	35.5	8.5	2.57	2.49
Triticale	16.9	76.5	36.0	8.1	2.68	2.22
Winter Barley	15.5	76.8	37.3	8.7	2.69	2.42
Cereal Rye	12.4	71.9	37.7	8.1	2.90	2.22



The pictures above show one field in late February (left) and at forage harvest in mid-May (right) taken from opposite ends of the field. The plot being mowed on the right is wheat, and the brown adjacent strip was oats.

TRIAL DETAILS

Planting date: 9/12/17

Fertility: 5,000 gallons dairy slurry manure per acre applied at planting, and 5,000 gallons dairy slurry manure applied again at spring green-up.

Harvest: 5/16/18

Crop Rotation: Cereal grains were no-till planted following corn silage harvest. Soybeans (Group 2.3) were no-till planted immediately following cereal grain harvest on 5/18/18. Weeds and cereal grain crops were successfully terminated with a mixture of glyphosate and Sharpen® prior to soybean emergence.

Cereal Grain Treatments:

1. Pro Leaf Oats (80 lbs/A)
2. Triticale Plus (75% Fall Triticale and 25% Italian Ryegrass) (75 lbs/A)
3. Byron Seeds Fall Triticale (125 lbs/A)
4. Pro 200 Wheat (125 lbs/A)
5. Paramount P-919 Winter Barley (100 lbs/A)
6. VNS Cereal Rye (125 lbs/A)
7. Control (No Crop)

Growing season conditions:

Early fall was warm and dry, followed by cool and wet fall and spring. Pro Leaf Oats did not survive the winter, so were not included in the analysis.

