SPRING HAY BARLEY VARIETY TEST

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Abstract

A new spring hay barley line, WA 7999-88, produced forage yields equivalent to Belford, but had better lodging resistance and shorter height under irrigated conditions.

Introduction

Washington State University is considering releasing a new spring hay barley line, WA-7999-88. There were no local data available. WA 7999-88 was compared to two commonly grown spring hay barleys.

Materials and Methods

Belford, Westford, and WA 7999-88 spring hay barleys were planted at 30 seeds per square foot (Belford, 113 lb/a; Westford, 109 lb/a; and WA 7999-88, 130 lb/a) on April 13, 1995, with a plot cone-type planter at the Central Oregon Agricultural Research Center, Powell Butte, Oregon. The plots were 5 feet x 20 feet, six rows, with 8 inch row spacing. The experimental design was a randomized complete block with three replications, except for Westford, which was only replicated once. The plots were fertilized with 40 pounds of sulfur (gypsum source) and 120 pounds of nitrogen fertilizer (ammonium nitrate source) on April 20, 1995. Irrigation was as needed by solid set hand lines. Plots were hand weeded. Forage yield was determined by harvesting the two center rows (1.33 feet x 15 feet) with a hand sickle. A 1-pound sample was weighed for moisture and dried at 149 degrees Fahrenheit until there was no change in weight. Yield is presented on a dry matter basis.

Results and Discussion

The hay yield and other agronomic data are presented in Table 1. The new Washington line shows potential, with superior lodging resistance compared to Belford. The experimental line, WA 7999-88, is shorter than either Westford or Belford. There was no yield difference between the varieties tested at the nitrogen fertility level utilized for this trial.

Table 1. Yield and other agronomic data for the spring hay barley variety trial conducted at the COARC, Powell Butte, Oregon in 1995.

Variety	Yield t/a	Dry Matter	Moisture	Height in.	Lodging	Harvest Date 1/1=1
Belford	4.99	36.9	63.1	42	57	206
WA 7999-88	5.36	36.8	63.2	38	12	207
Mean	5.18	36.9	63.1	40	34	206.5
PLSD .10	NS	NS	NS	S	S	S
PLSD .05	NS	NS	NS	NS	NS	S
CV%	11.7	3.6	2.1	5.3	45.1	0
Westford*	4.86	37.0	63.0	39	0	206

* 1 rep only