Agronomic Evaluation of Waxy Proso Millets in the High Plains. (C03-heyduck125121-Poster)

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Abstract:

Proso millet (Panicum miliaceum L.) is a warm season grass that can produce seed 60 to 90 days from planting. Proso starch is generally composed of about 75% amylopectin and 25% amylose, while 'waxy' starch is characterized by <5% amylose. This three year trial compares the agronomic traits of 3 waxy types with 19 white seeded and 3 red seeded non-waxy types. Plots were 1.83 m wide and 7.6 m long and planted with small-plot drills at 13 location years across the High Plains. Non-waxy '9217', pending release from University of Nebraska, had a three year average of 2460 kg/ha compared with an average of 2350 kg/ha for check cultivars 'Sunrise', 'Hunstman', and 'Sunup' and an average of 1310 kg/ha for the waxy lines. Three year test weight averaged 736 kg/m^3 for the trial with check cultivars averaging 746 kg/m^3 and waxy lines averaging 702 kg/m^3. Waxy lines had the smallest seeds with an average of 192 seed/g compared with 163 seed/g for the check cultivars and 168 seed/g for the trial overall. In one year data from 2001, grain moisture on September 3 averaged 18% for check cultivars and 30% for waxy lines. Waxy lines headed an average of 7 days later than check cultivars. Additional work is needed to introduce the waxy trait into lines adapted to the High Plains.

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Presentation Information:

Presentation Date: Monday, November 11, 2002
Presentation Time: 4:00-6:00 pm
Poster Board Number: 1036

Keywords:

small grains, proso millet, panicum miliaceum, waxy starch