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Alfalfa Variety Testing

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Alfalfa Variety Testing

Abstract

New varieties of alfalfa are released by commercial breeding companies each year. The Iowa State University forage breeding program, in conjunction with the Iowa Crop Improvement Association, tests commercially available varieties at five locations in Iowa, including at the Western Research Farm. Funding to conduct these tests is provided by entrants who pay a fee to have their varieties included. Our tests provide an unbiased comparison among cultivars deemed to be adapted to particular regions of the state by the companies.

Keywords

Agronomy

Disciplines

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Alfalfa Variety Testing

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times in 1999 and 2000 using a sickle bar harvester. Fertility was maintained according to ISU soil test recommendations. The test was not sprayed for potato leafhoppers.

Introduction

New varieties of alfalfa are released by commercial breeding companies each year. The Iowa State University forage breeding program, in conjunction with the Iowa Crop Improvement Association, tests commercially available varieties at five locations in Iowa, including at the Western Research Farm. Funding to conduct these tests is provided by entrants who pay a fee to have their varieties included. Our tests provide an unbiased comparison among cultivars deemed to be adapted to particular regions of the state by the companies.

Materials and Methods

A variety trial was planted in April 1998 with a drill at a rate of 18 lb/A. Each variety was replicated four times in a randomized complete block design. Plot size was 3 ft x 12 ft. The test was harvested three times in 1998, and four

Results and Discussion

Forage yields (in tons of dry matter per acre) were less in 2000 than in 1999 (Table 1). When choosing varieties, several traits are important, including high yield, maintenance of yielding ability through the later years of a trial, and disease resistance. More complete information on the alfalfa variety trials, including seed sources and disease resistance profiles, are available in ISU Extension Bulletin AG-84 or online at:

<http://www.public.iastate.edu/~brummer/extension.html>.

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Table 1. Alfalfa variety test yields.

Variety	Yield (tons dry matter/acre)			
	1998	1999	2000	Avg ^a
DK140	4.52	8.24	5.67	6.95
Feast+EV	4.40	8.29	5.54	6.92
DK142	4.25	8.14	5.69	6.91
DK141	4.54	8.10	5.52	6.81
5454	4.09	8.07	5.53	6.80
Baralfa 54	4.30	8.63	4.85	6.74
53Q60	4.21	7.97	5.46	6.71
Depend+EV	4.42	8.08	5.27	6.67
Amerigraze 401 +Z	4.34	7.46	5.66	6.56
Vernal	4.41	7.61	5.45	6.53
Innovator +Z	4.43	7.32	5.58	6.45
GoldPlus	4.09	6.80	4.90	5.85
Mean	4.37	7.88	5.42	6.65
LSD (P=0.05)	0.29	0.83	0.45	0.58

^aAverage of 1999 and 2000 only.