

Alfalfa Variety Trial in Greenlee County, 1986

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ABSTRACT

Ten alfalfa varieties ranging from very non-dormant to moderately dormant were tested. No statistically significant differences were seen. The highest yielding variety yielded more than seven tons per acre, considerably better than the county average of 5.5 tons per acre.

INTRODUCTION

Alfalfa is a very important crop in Greenlee county since its dairy and beef cattle industry play a prominent part in the county's economy. Even though alfalfa variety yield data are available in Graham county in Arizona (1,2) and in several locations in New Mexico (3), Greenlee county growers lack such information. Since alfalfa varieties are very much affected by local climatic conditions, a local alfalfa variety trial was implemented.

MATERIALS AND METHODS

Ten alfalfa varieties with the highest yield potential were selected. CUF 101 was included as a standard of very non-dormant alfalfa and Lew was included to evaluate the effect of stem nematode.

Location: Larry Barney farm, north of Duncan

Elevation: 3,500 feet above sea level

Soil type: Pima silty clay loam

Planted: 11 September 1985

Plot size: 3 feet by 20 feet

Replications: 4

Plots were cut using a Jari hand mower and weighed immediately to avoid moisture loss. The weights were converted to dry weight at 12% moisture. The field was grazed before the first cutting, so the May 22nd cutting was really the second cutting.

RESULTS

Table 1. Yields in pounds per acre at 12 % moisture.

Variety	22 May	17 Jun	17 Jul	20 Aug	30 Sep	Total
Baron	4710	2577	2445	2259	2185	14177
Hi-Phy	4515	2536	2771	2309	2033	14162
Pioneer 5929	4024	2391	2597	2301	2037	13350
NK Pierce	4051	2649	2239	2350	1991	13280
Lew	3420	2338	2519	2511	2492	13280
Cuf 101	3876	2278	2367	2375	2148	13043
Valiant	3742	2381	2544	2226	1981	12874
Ardiente	4020	1969	2160	2218	1985	12352
Palmer Special	3886	1721	2094	2255	2028	11985
Rincon	3649	1515	1884	1913	1874	10835
LSD (05)				1321.5		
% C.V.	19.7	21.0	20.3	10.6	11.3	6.6

DISCUSSION

Because of the high variability in plot weights between replicates for the first three cuttings, there was no statistically significant difference between the yields at the 5% level of probability.

The moderately dormant varieties, Baron and Hi-Phy, seemed to have a small yield advantage over the very non-dormant Pioneer 5929 and the non-dormant Pierce. This apparent advantage came in the first cutting which was heavily infested with London rocket (pepper weed, a winter weed in the mustard family). It is possible that the moderately dormant varieties with less spring vigor had a higher intrusion of London rocket, and that the yield difference was due to weeds.

Since Lew, a stem nematode resistant variety, did not rank very high in yield, the likelihood of stem nematode being a serious problem is slim. Nigh (4) did not sample for nematodes in Greenlee county but found no stem nematodes in the samples he took in neighboring Graham and Cochise counties.

REFERENCES

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