

**Alfalfa Variety Demonstration
Safford Agricultural Center 1985**

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INTRODUCTION

Alfalfa varieties are very much affected by the climatic conditions that exist in different parts of the state. This alfalfa demonstration is to help the farmers in Graham county learn the yield potential of these 21 varieties.

METHODS AND MATERIALS

Location: Safford Agricultural Center, Graham County
Elevation: 2900 feet
Planted: 7 September 1983
Plot Size: 2.5 feet X 20 feet
Replications: 4

The plots were hand-harvested using a Jari mower, weighed immediately and the dry weight calculated ($f=197.9$).

RESULTS

Table 1. Yields in pounds per acre at 12% moisture for 1985

Variety	24Apr R*	28May R	01Jul R	30Jul R	03Sep R	24Oct R	Total
Pioneer 5929	4492 7	4977 3	4350 1	4399 1	3400 1	2162 1	23781
Ardiente	5112 2	5122 1	3934 8	4364 2	3103 5	1776	23411
Pierce	4987 3	5062 2	3974 6	4073 7	3077 7	2033 3	23207
Palmer Spec	4285	4908 4	4231 3	4285 3	3359 2	2088 2	23155
Maxidor	4621 5	4706 6	4057 4	4132 4	3063	1979 4	22558
AS-13R	5116 1	4829 5	3918 9	3968 9	2998	1692	22521
Safford 80	4271	4637 9	4271 2	4106 6	3127 3	1949 5	22361
WL514	4657 4	4621	3918 9	4122 5	3072 9	1920 7	22310
Lew	4285	4700 7	4023 5	3958	3063	1939 6	21969
Lew PM	4201	4607	3899	4007 8	3107 4	1816	21637
Mesa Sirsa LH	4324	4641 8	3657	3780	3077 8	1915 8	21394
GT-13R+	4383	4419	3948 7	3825	3077 6	1722	21375
Cuf 101	4334 9	4463	3598	3869	2866	1756	20885
WL-515	4528 6	4393	3538	3697	2820	1821 9	20797
Granada	4354	4463	3740	3612	2706	1504	20379
Mesa Sirsa	3978	4518	3335	3780	2978	1707	20296
Washoe	4443 8	4166	3619	3612	2658	1638	20135
Pioneer 572	4097	4294	3542	3622	2721	1593	19869
AZ Hayden	3503	4192	3681	3770	2771	1588	19504
Matador	4116	4112	3414	3236	2538	1351	18767
Moapa	3212	3835	3402	3661	2741	1588	18439
LSD(05)	1188	923	NS	497	437	299	1943
CV	19.5%	14.5%	16.1%	12.0%	13.9%	16.1%	

* Ranking of the top nine varieties.

DISCUSSION

Two of the top three yielders in this trial (Pioneer 5929 and Northrup King Pierce) were new varieties in 1983 when the plots were planted. This fact indicates a need for ongoing trials to evaluate new material as it becomes available.

Pioneer 5929 started off slowly in the Spring (ranking 7th first cutting) but then took off and outyielded all varieties from the 3rd cutting to the end. Ardiente (No. 2) started strong, had slumps in the middle and end of the season, but maintained good overall weight. This was surprising since it was No. 11 in a field of 20 in the previous variety trial (Cluff et al., Arizona Forage and Grain Report, 1983, p 17). Pierce wasn't number 1 at any of the cuttings but had strong cuttings all through the season.

One year's data is not sufficient to draw conclusions. Insects, weed competition and disease will differentially thin the stand and reduce yield of the different varieties. This demonstration will be maintained through the 1987 season to see how these varieties yield over time.

RESULTS

Table 1. Yields in pounds per acre of 12% moisture for 1982

Variety	24Apr R*	28May R	01Jun R	30Jul R	03Sep R	24Oct R	Total
Pioneer 2929	4402.7	4077.3	4320.1	4709.1	3400.1	2102.1	23781
Arbuckle	2112.2	2122.1	3094.8	4304.2	2102.2	1776	23411
Pioneer	4087.3	3002.2	3074.6	4073.7	3071.7	3033.3	23207
Palmer Spec	4382	4004.4	4231.3	4282.3	3300.2	3088.2	23122
Mandan	4021.2	4706.6	4027.4	4132.4	3002	1970.4	23228
A2-138	2116.1	4029.2	3018.9	3008.9	2008	1002	23221
Salford 90	4271	4037.9	4271.2	4106.6	3127.3	1040.2	23201
WL214	4027.4	4021	3018.9	4122.2	3027.9	1020.7	23210
Low	4282	4200.7	4022.2	3028	3003	1020.6	21009
Low PM	4201	4007	3809	4007.8	3107.4	1010	21027
Meza 2104 LH	4224	4041.8	3027	3780	3077.8	1012.8	21004
GT-138+	4283	4419	3048.7	3822	3077.4	1722	21222
Cut 101	4234.9	4403	3708	3809	2002	1700	20882
WL-212	4228.6	4202	3028	3007	2020	1021.9	20707
Granada	4224	4402	3740	3012	2700	1204	20710
Meza 2104	3078	4218	3322	3780	2078	1707	20206
Washoe	4442.8	4100	3019	3012	2028	1028	20122
Pioneer 272	4007	4204	3042	3022	2721	1203	19809
A2 Hayden	3202	4102	3081	3770	2741	1288	19204
Mandan	4110	3014	3026	2200	1221	1221	18707
Moapa	3012	3002	3001	2741	1288	1288	18439
LS(07)	1102	222	102	427	127	200	1013
CV	10206	14206	10120	12006	13006	10106	

* Rank of the top nine varieties

DISCUSSION

Two of the top three yields in this trial (Pioneer 2929 and Mandrup King Pioneer) were new varieties in 1982 when the plots were planted. This fact indicates a need for ongoing trials to evaluate new material as it becomes available.

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One year's data is not sufficient to draw conclusions. Insects, weed competition and disease will differentially hit the stand and reduce yield of the different varieties. This demonstration will be maintained through the 1983 season to see how these varieties yield over time.