Barley Variety Demonstration

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Jim Alder Graham County

Elevation: 2800
Crop History:
Planted: Dec. 31, 1980
Seeding Rate: 180 lbs/A
Previous Crop: Cotton
Harvested: June 8, 1981
Irrigation: An estimated 24 acre inches per acre were applied to the plot. Rainfall supplied an additional amount.

Fertilizer:

Source	Lbs/Acre	Time of Application	Lbs N/acre	Lbs P_2O_5/acre
28-28-0	200	Prior to planting	46	46
NH_3	75	During first irrigation	62	0
NH_3	75	During second irrigation	62	0
		Total	170	46

Soil Analysis:

pH = 7.9 (paste with distilled H_2O);
$EC_e \times 10^3$ = 3.38 (to convert $EC_e \times 10^3$ to soluble salts, multiply $EC_e \times 10^3 \times 700$);
Soluble salts = 2366 ppm
N = 48.85 ppm (from CO_2 extraction. Nitrate reported as N. To convert N to NO_3, multiply N x 4.4);
P = 4.10 ppm (CO_2 extraction. Phosphate reported as P. To convert P to PO_4, multiply P by 3.1).
Date of Sample: Dec. 30, 1980 (University of Arizona Laboratory)
Plot Size: 400' x 12'

Entry	Yield (lbs/plot)1/ Rep 1	Rep 2	Rep 3	Rep 4	Ave. Yield (lbs)	Ht (in)	Bu Wt (lbs)	Lodging (%)	Yield2/ (lbs/A)
Gus	930	930	920	860	910	32	50	0	8270 a
NK409	860	920	890	810	870	35	48	0	7900 a
NK400	730	860	810	800	800	27	47	0	7230 b
NK401	680	800	760	750	750	31	47	0	6810 bc
Poco3/	610	800	810	710	730	22	49	0	6630 bc
Prato	670	760	640	710	690	35	48	10	6300 cd
Signal	520	670	710	650	640	40	50	100	5780 d

1/ At harvest, moisture content averaged 7%. All yields have been adjusted to a 10% moisture content.
2/ Yields followed by the same letter are not significantly different at the .05 level by the Student-Newman Keuls' Test.
3/ Poco barley could have been harvested 25 days earlier.

ENVIRONMENT INFLUENCES THE GROWTH AND YIELD OF TWO GENOTYPES OF SPRING BARLEY

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Summary

Field experiments were conducted from 1976 through 1978 at Yuma, Arizona and Logan, Utah to investigate the effects of environment on growth and grain yields of Arimar and Arizona 1970-1 barley (Hordeum vulgare L.) genotypes grown under irrigation. The genotypes were grown from December to June in Arizona and from April to August in Utah each year for three years.