

TITLE: Safflower Variety Trial

PROJECT: Miscellaneous Crops Investigations MS 758

PERSONNEL: Project Leader - Leon E. Welty
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Research Assistant - Dale E. Mahugh

LOCATION: Northwestern Agricultural Research Center, Kalispell, Montana

DURATION: Indefinite

OBJECTIVE: Evaluate four safflower varieties for seed yield under dryland and irrigated conditions in northwestern Montana.

PROCEDURES: Four safflower varieties were seeded at a rate of 20 pounds per acre under dryland and 25 pounds per acre under irrigation on May 18, 1973 in a randomized complete block design. Plot size was 4 feet by 12 feet with one foot between rows and plots. Sixteen square feet were harvested for yield from each plot on October 2, 1973.

RESULTS: Dryland yields were greater than irrigated yields for all entries. This could possibly be explained by the delayed maturity under irrigation. Under dryland, yields ranged from 601 pounds per acre to 1159 pounds per acre (Table 1). Under irrigation, yields varied from 203 pounds per acre to 544 pounds per acre (Table 2). In both plantings #87-14-6 had a significantly higher yield.

Table 1. Yields of dryland safflower in pounds per acre, Kalispell, 1973.

Variety	Rep. I	Rep. II	Rep. III	Total	Mean ^{1/}
208	863.5	725.6	245.9	1835.0	611.7b
#87-42-3	1133.4	989.5	347.8	2470.7	823.6b
U.S. 10	1079.4	437.8	287.8	1805.0	601.7b
#87-14-6	1433.2	1361.3	683.6	3478.1	1159.4a

^{1/} Means followed by the same letter are not significantly different at 0.05 level according to Duncan's Multiple Range Test.

Mean yield = 799.07 pounds per acre

F - value for variety yield comparison = 9.14*

S.E. \bar{x} = 86.34 pounds per acre

C.V. = $\frac{S\bar{x}}{\bar{x}}$ = 10.81%

Table 2. Yields of irrigated safflower in pounds per acre, Kalispell, 1973.

Variety	Rept. I	Rep. II	Rep. III	Rep. IV	Total	Mean ^{1/}
208	491.7	263.9	24.0	36.0	815.6	203.9b
#87-42-3	887.5	263.9	60.0	30.0	1241.4	310.4b
U.S. 10	731.6	161.9	30.0	95.9	1019.4	254.9b
#87-14-6	947.5	851.5	119.9	257.9	2176.8	544.2a

^{1/} Means followed by the same letter are not significantly different at 0.05 level according to Duncan's Multiple Range Test.

Mean yield = 328.33 pounds per acre

F - value for variety yield comparison = 4.30*

S.E. \bar{x} = 72.50 pounds per acre

C.V. = $\frac{S\bar{x}}{\bar{x}}$ = 22.08%