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TITLE: Crambe Variety Trial

PROJECT: Miscellaneous Crops Investigations MS 758

PERSONNEL: Project Leader - Leon E. Welty
Cooperator - H. N. Metcalf

LOCATION: Northwestern Agricultural Research Center, Kalispell, Montana

DURATION: Indefinite

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

PROCEDURES: Three crambe varieties were seeded at a rate of 15 pounds per acre under dryland and irrigated conditions 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. Both dryland and irrigated plots were harvested on August 27, 1973.

RESULTS: Under dryland, yields ranged from 454 pounds per acre to 712 pounds per acre, with Meyer being significantly the highest (Table 1). No significant differences were obtained under irrigation. Prophet at 1400 pounds per acre was the highest yielding entry (Table 2). An interaction between irrigation and variety was evident. Under both regimes, Indy matured about one week earlier than either Meyer or Prophet. Indy was significantly taller than either Prophet or Meyer under both dryland and irrigation (Tables 3 and 4).

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

Variety	Rep. I	Rep. II	Rep. III	Total	Mean ^{1/}
Indy	353.8	647.6	431.8	1433.2	477.7b
Meyer	647.6	797.6	689.6	2134.8	711.6a
Prophet	293.8	467.7	599.7	1361.2	453.7b

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

Mean yield = 547.69 pounds per acre

F - value for variety yield comparison = 6.29 (not significant at .05)

S.E. \bar{x} = 56.82 lbs/acre

C.V. = $\frac{S\bar{x}}{\bar{x}}$ = 10.38%

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

Variety	Rep. I	Rep. II	Rep. III	Rep. IV	Total	Mean ^{1/}
Indy	671.6	989.5	1823.0	1295.3	4779.4	1194.9a
Meyer	503.7	1247.3	2020.9	1403.2	5175.1	1293.8a
Prophet	605.7	1469.2	2152.8	1403.2	5630.9	1407.7a

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

Mean yield = 1298.78 pounds per acre

F - value for variety yield comparison = 2.68 (not significant at .05)

S.E. \bar{x} = 65.09 pounds per acre

C.V. = $\frac{S\bar{x}}{\bar{x}}$ = 5.01%

Table 3 . Height in inches of dryland crambe, Kalispell, 1973.

Variety	Rep. I	Rep. II	Rep. III	Total	Mean ^{1/}
Indy	34	35	32	101	34a
Meyer	32	33	31	96	32b
Prophet	31	29	30	90	30b

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

Mean height = 31.89 inches

F - value for variety height comparison = 7.89*

S.E. \bar{x} = .653 inches

C.V. = $\frac{S\bar{x}}{\bar{x}}$ = 2.04 %

Table 4 . Height in inches of irrigated crambe, Kalispell, 1973.

Variety	Rep. I	Rep. II	Rep. III	Rep. IV	Total	Mean ^{1/}
Indy	46	48	52	46	192	48a
Meyer	35	44	45	44	168	42b
Prophet	35	37	39	39	150	37c

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

Mean height = 42.50 inches

F - value for variety height comparison = 21.26**

S.E. \bar{x} = 1.32 inches

C.V. = $\frac{S\bar{x}}{\bar{x}}$ = 3.10%