

TITLE: Safflower Variety Performance Investigations

YEAR: 1991

LOCATION: Central Agricultural Research Center, Moccasin

PERSONNEL:

Project Leader: Jerald W. Bergman, EARC
David M. Wichman

Cooperators: Joe Vavrovsky, Technician CARC.

Safflower variety performance trials were established at Moccasin and at Geraldine. The Moccasin location was planted no-till into Clark barley stubble. The Geraldine nurseries were established on fallow and on recrop.

The Moccasin location was hailed severely July 14. Early maturing safflower varieties were in the late bud stage when hailed. The variety trial nursery averaged 209 lbs/a. That is about the yield level when growing seasons are cool or shortened by a late August frost.

The Geraldine location safflower yields were about 800-1000 lbs/a lighter than expected for both fallow and recrop. Cool wet spring growing conditions may have contributed to infection by some undetected disease resulting in low yields. The cooperating farmer had safflower yields similar to the variety nursery. A neighboring producer, who planted later, had higher yield levels.

Oil content information will be available at a later date.

165

TABLE S1. 1991 ON STATION SAFFLOWER TRIAL ON RECROP
Exp.#sf07 Central Agricultural Research Center - Moccasin, MT.

VARIETY	GRAIN YIELD	TEST WEIGHT	PLANT HEIGHT	OIL CONTENT
	Lbs/A.	Lb/Bu.	Inches	%
CENTENNIAL	196.01	33.80	29	
S 208	166.03	30.40	31	
85B 4431	250.21	35.10	29	
85B 3829	260.69	36.00	26	
88B 3006	149.35	32.20	26	
MONTOLA 2000	308.47	34.60	26	
S-541	199.71	33.20	32	
FINCH	280.51	42.40	31	
GIRARD	164.01	34.50	32	
MT 3697	174.19	30.90	29	
S-317	287.31	36.40	32	
SAFFIRE	115.39	- *	30	
OKER	165.48	33.00	29	
EXPERIMENTAL MEANS	209.03			
F TEST FOR VAR. (df=24)	5.8			
C.V. 1: (S/MEAN)*100	21.0			
C.V. 2: (S MN/MN)*100	12.2			
LSD (0.05)	74.11			

* Insufficient amount of seed for test weight.

Planted: 4-23-1991 on clark barley stubble

Harvested: 9-25-1991

Fertilizer: 60 lbs Urea Broadcast, 50 lbs. 18-46-0 with seed.

Soil: 17-18" moist soil, 2" soil temp. 13 C.

Growing Season Precipitation (April-August): 12.9 inches.

Cooperators: D. Wichman, J. Bergman, J. Vavrovsky

Comments: The Safflower Trial was initially flowering on 7-14-1991 when it suffered hail damage. Due to regrowth, it continued to flower through August.

TABLE S2. Dryland Fallow Safflower Variety Performance Nursery,
grown at Geraldine on fallow.
7707 Central Agricultural Research Center - Moccasin, MT.

VARIETY	GRAIN YIELD	TEST WEIGHT	PLANT HEIGHT	OIL CONTENT
	Lb/A.	Lbs/Bu	Inches	%
87B 1298	1547.9	40.6	36	
S-317	1544.0	39.5	37	
GIRARD	1464.2	40.9	38	
S-208	1438.3	40.5	35	
85B 4431	1386.1	40.8	36	
S-541	1383.7	40.7	36	
SAFFIRE	1346.9	40.7	34	
MONTOLA 2000	1332.5	38.1	32	
OKER	1328.1	38.9	34	
CENTENNIAL	1312.9	38.9	35	
89B 6145	1306.4	38.8	30	
FINCH	1291.3	42.3	38	
85B 3910	1264.8	37.7	35	
88B 3217	1239.6	38.1	37	
87B 1650	1206.5	38.0	35	
85B 3829	1150.6	39.5	34	
88B 3006	1129.2	38.7	36	
MT 3697	900.6	39.5	34	
EXPERIMENTAL MEANS	1309.65	39.56		
F TEST FOR VAR.	2.53	10.32		
C.V. 1: (S/MEAN)*100	12.90	1.73		
C.V. 2: (S MN/MN)*100	7.45	1.00		
LSD (0.05)	280.39	1.13		

Planted: 4-25-91 into ground in which weak stand of winter
wheat was torn out.

Harvested: 9-6-1991

Fertility: 50 lbs/ac 18-46-0 with seed, 50 units of N/ac as
Urea applied preplant.

Soil Test:

Growing season precipitation: 8.5"

Cooperator: D. Wichman, J. Bergman

Producer: Roger Van Voast, Geraldine

Comments:

167

Table S3. Dryland Recrop Safflower Variety Performance Nursery,
Grown on recrop at Geraldine.
7717 Central Agricultural Research Center - Moccasin, MT.

VARIETY	GRAIN YIELD	TEST WEIGHT	PLANT HEIGHT	OIL CONTENT
	Lbs/A.	Lb/Bu.	Inches	%
87B 1298	616.8	39.4	31	
85B 4431	529.7	38.4	32	
GIRARD	509.7	38.2	34	
SAFFIRE	504.7	37.6	31	
98B 3217	457.2	37.0	34	
S-317	452.4	34.6	34	
CENTENNIAL	448.7	35.6	32	
S-541	441.9	37.8	34	
S-208	426.1	38.2	32	
85B 3829	418.6	37.6	29	
MONTOLA 2000	387.4	34.0	28	
OVER	347.6	36.4	32	
89B 6145	305.2	34.4	26	
FINCH	296.3	34.3	33	
85B 3910	289.3	33.8	29	
87B 1650	287.9	35.8	32	
MT 3697	222.9	.0	33	
88B 3006	214.3	.0	32	
EXPERIMENTAL MEANS	397.59			
F TEST FOR VAR.	1.28			
C.V. 1: (S/MEAN)*100	42.99			
C.V. 2: (S MN/MN)*100	24.82			
LSD (0.05)	283.62			

Planted: 4-25-91 into tilled stubble.
Harvested: 9-6-1991
Fertility: 50 lbs/ac 18-46-0 with seed, 50 units of N/ac as
Urea applied preplant.

Soil Test:
Growing Season Precipitation: 8.5"
Cooperator: D. Wichman, J. Bergman
Producer: Roger Van Voast, Geraldine
Comments: