

CORN SCREENING TRIAL

**Spring
1969**

**Oregon State University
Farm Crops Department
Corvallis, Oregon**

NOT FOR PUBLICATION

Corn Screening Trial
East Farm--Corvallis, Oregon
1969

In early May of 1969 a corn screening trial was established on the East Farm Experiment Station near Corvallis. The purpose of the trial was to determine the effectiveness and safety of a series of experimental herbicides. The herbicides in the trial were included as a result of information taken from the 1969 Hawaii screening trial and information provided by chemical companies.

Corn and weeds were seeded on May 3, 1969. The corn was a Northrup King sweet corn NK75. Weed seeds were spread on top of the soil and harrowed into the top inch. Pigweed (Amaranthus retroflexus), lamquarters (Chenopodium album), and green foxtail (Setaria viridis) were seeded. Smartweed (Polygonum spp.) and nightshade (Solanum nigrum) were also present in sufficient numbers to be evaluated.

Preplant herbicide applications were made on May 2 and were incorporated into the top two inches of soil with a tractor tiller. Preemergence applications were made on May 6 and postemergence treatments were applied on June 3. All treatments were made with a broadcast sprayer using 43 gallons of water per acre. About five inches of rainfall or irrigation by sprinklers was recorded up to the time of evaluation. The soil for this trial is a loam with less than 2 per cent organic matter.

Results

The trial was evaluated on June 19, 1969, and the results can be found on the following pages. In some cases there is a considerable difference in results between the first and second replications. This is probably due to soil differences. In general, the first replication is on a heavier soil than the second.

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	lbs ai/A	% Corn Injury		% Pigweed		% Lambsquarters		% Setaria		% Night Shade		% Smart Weed	
		I	II Ave.	Control	I II Ave.	I	II Ave.	I	II Ave.	I	II Ave.	I	II Ave.
PP 493	Pre	.5	80 70 75	100 90 95	100 100 100	30 70 50	0 40 20	80 80 80	100 100 100	0 0 0	100 100 100	100 100 100	100 100 100
"	Pre	1.0	100 90 95	100 100 100	100 100 100	50 80 65	30 70 50	100 100 100	100 100 100	20 70 45	100 100 100	100 100 100	100 100 100
"	Pre	2.0	100 90 95	100 100 100	100 100 100	30 80 55	50 80 65	100 100 100	100 100 100	30 90 60	100 100 100	100 100 100	100 100 100
"	Post	.25	0 50 25	90 100 95	30 70 50	0 40 20	0 40 20	80 80 80	100 100 100	0 0 0	100 100 100	100 100 100	100 100 100
"	Post	.50	20 50 35	100 100 100	50 80 65	30 70 50	30 70 50	100 100 100	100 100 100	20 70 45	100 100 100	100 100 100	100 100 100
"	Post	1.0	30 50 40	100 100 100	30 80 55	50 80 65	50 80 65	100 100 100	100 100 100	30 90 60	100 100 100	100 100 100	100 100 100
Bay 83775	Pre	2	0 0 0	90 60 75	90 60 75	90 60 75	0 0 0	0 0 0	100 80 90	100 80 90	100 30 65	100 80 90	100 80 90
"	Pre	4	30 0 15	100 90 95	90 80 85	90 80 85	80 20 50	100 80 90	100 80 90	100 80 90	100 80 90	100 80 90	100 80 90
Bay 85566	Pre	.75	30 40 35	80 60 70	100 100 100	100 100 100	0 0 0	0 0 0	100 70 85	100 70 85	100 40 70	100 40 70	100 40 70
"	Pre	1.5	50 60 55	- 90 90	100 100 100	100 100 100	80 40 60	100 100 100	100 100 100	100 100 100	100 90 95	100 90 95	100 90 95
Bay 85566a	Pre	.75	0 0 0	90 80 85	70 90 80	70 90 80	0 10 5	0 10 5	70 80 75	70 80 75	100 80 90	100 80 90	100 80 90
"	Pre	1.5	20 0 10	100 90 95	90 90 90	90 90 90	0 40 20	0 40 20	90 90 90	90 90 90	100 90 95	100 90 95	100 90 95
R 15302	PPI	3	50 70 60	90 50 70	100 100 100	100 100 100	90 90 90	90 90 90	100 100 100	100 100 100	100 100 100	100 100 100	100 100 100
"	PPI	6	90 90 90	100 90 95	100 100 100	100 100 100	100 100 100	100 100 100	100 100 100	100 100 100	100 100 100	100 100 100	100 100 100
"	Pre	3	70 80 75	90 - 90	100 100 100	100 100 100	80 90 85	80 90 85	100 100 100	100 100 100	100 100 100	100 100 100	100 100 100
"	Pre	6	100 90 95	100 100 100	100 100 100	100 100 100	100 100 100	100 100 100	100 100 100	100 100 100	100 100 100	100 100 100	100 100 100
"	Post	3	0 0 0	0 20 10	90 90 90	90 90 90	0 10 5	0 10 5	100 90 95	100 90 95	20 50 35	20 50 35	20 50 35
"	Post	6	20 20 20	0 20 10	90 90 90	90 90 90	20 30 25	20 30 25	100 100 100	100 100 100	80 90 85	80 90 85	80 90 85
R 15431	PPI	3	30 30 30	90 90 90	100 100 100	100 100 100	90 80 85	90 80 85	100 100 100	100 100 100	100 100 100	100 100 100	100 100 100
"	PPI	6	80 90 85	100 90 95	100 100 100	100 100 100	100 90 95	100 90 95	100 100 100	100 100 100	100 100 100	100 100 100	100 100 100
"	Pre	3	70 70 70	100 90 95	100 100 100	100 100 100	50 80 65	50 80 65	100 100 100	100 100 100	100 100 100	100 100 100	100 100 100
"	Pre	6	90 90 90	100 100 100	100 100 100	100 100 100	90 100 95	90 100 95	100 100 100	100 100 100	100 100 100	100 100 100	100 100 100

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		I	II Ave.	I	II Ave.	I	II Ave.	I	II Ave.	I	II Ave.	I	II Ave.
2, 4-D WP	Pre 2	0	70 35	80	90 85	50	20 35	30	80 55	50	90 70	0	0 0
CRD 67-5378	Pre 2	0	0 0	70	90 80	10	20 15	0	0 0	0	20 10	0	0 0
"	Pre 4	0	0 0	90	100 95	30	80 55	0	40 20	70	80 75	0	50 25
CRD 67-5394	Pre 2	0	0 0	0	0 0	0	20 10	0	0 0	0	0 0	0	0 0
"	Pre 4	0	0 0	0	20 10	0	30 15	0	0 0	0	0 0	0	0 0
index	Pre 2	100	100 100	100	100 100	100	100 100	100	100 100	100	100 100	100	100 100
"	Pre 4	100	100 100	100	100 100	100	100 100	100	100 100	100	100 100	100	100 100
C-15548	Pre 2	0	0 0	90	80 85	80	80 80	0	40 20	80	100 90	70	80 75
"	Pre 4	0	0 0	90	90 90	90	90 90	10	80 45	100	100 100	90	90 90
C 4901	Post 2	0	0 0	30	50 40	0	20 10	0	0 0	0	0 0	40	70 55
"	Post 4	0	0 0	70	80 75	60	80 70	0	0 0	0	0 0	60	90 75
AP 83585	Pre 1	10	40 25	100	100 100	100	100 100	0	90 45	100	100 100	100	100 100
"	Pre 2	70	80 75	100	100 100	100	100 100	50	100 75	100	100 100	100	100 100
BAS 2903	Pre 3	0	0 0	100	100 100	100	100 100	60	90 75	80	100 90	70	100 85
"	Pre 4	0	0 0	100	100 100	100	100 100	70	90 80	90	90 90	80	100 90
"	Pre 5	0	0 0	100	100 100	100	100 100	90	90 90	100	100 100	100	100 100
BAS 2903 + Atr.	Pre 3+1	0	0 0	100	100 100	100	100 100	90	100 95	100	100 100	100	100 100
S 6115	Pre 2	0	0 0	100	100 100	100	100 100	70	90 80	100	100 100	100	100 100

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	lbs ai/A	% Corn Injury			% Pigweed			% Lambsquarters			% Setaria			% Night Shade			% Smart Weed		
		Injury			Control			Control			Control			Control			Control		
		I	II	Ave.	I	II	Ave.	I	II	Ave.	I	II	Ave.	I	II	Ave.	I	II	Ave.
R 15431	Post 3	0	20	10	0	20	10	20	90	55	0	0	0	90	100	95	30	70	50
"	Post 6	0	20	10	20	20	20	80	100	90	0	20	10	100	100	100	80	90	85
SD 15418	Pre 2	0	0	0	80	80		100	100	100	90	90	90	100	90	95	100	100	100
"	Pre 4	0	0	0	90	90		100	100	100	100	100	100	100	100	100	100	100	100
AC 78100	Pre .75	10	20	15	60	70	65	70	80	75	0	10	5	80	100	90	100	100	100
"	Pre 1.5	40	70	55	90	90	90	90	90	90	20	50	35	100	100	100	100	100	100
AC 78100 + X-77	Post .25	40	10	25	30	20	25	80	70	75	0	0	0	10	20	15	10	10	10
"	Post .5	40	10	25	40	30	35	90	90	90	0	0	0	50	100	75	70	50	60
"	Post 1.0	40	30	35	60	70	65	100	100	100	0	0	0	80	100	90	90	80	85
AC 78126	Pre .75	0	40	20	70	80	75	70	80	75	0	10	5	90	100	95	100	100	100
"	Pre 1.5	0	50	25	90	90	90	90	90	90	10	50	30	100	100	100	100	100	100
AC 78126 + X-77	Post .25	0	20	10	30	20	25	70	70	70	0	0	0	10	0	5	30	80	55
"	Post .5	0	20	10	50	50	50	90	90	90	0	0	0	60	70	65	100	90	95
"	Post 1.0	20	30	25	60	80	70	90	90	90	0	0	0	80	90	85	90	90	90
Hoe 2990	Pre 1	0	0	0	70	30	50	70	30	50	0	0	0	80	20	50	0	80	40
"	Pre 2	0	0	0	80	90	85	90	70	80	30	0	15	100	70	85	90	100	80
Dacthal	Pre 6	0	0	0	80	70	75	90	90	90	90	80	85	80	70	75	70	100	85
"	Pre 8	0	0	0	80	70	75	90	90	90	90	90	90	90	90	90	80	100	90
Dacthal Plus	Pre 4.8+	10	50	30	80	90	85	70	80	75	90	90	90	90	100	95	0	0	0
2, 4-D Tank Mix	1.2																		
"	Pre 6+1.5	40	60	50	90	90	90	80	90	85	100	100	100	90	100	95	0	0	0
Dacthal + 2, 4-D	Pre 4.8+	20	40	30	90	90	90	80	90	85	90	100	95	80	100	90	0	0	0
Formulated	1.2																		
"	Pre 6+1.5	30	70	50	90	90	90	90			90	100	95	90	100	95	0	0	0

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			I	II Ave.	I	II Ave.	I	II Ave.	I	II Ave.	I	II Ave.	I	II Ave.
R 16024	PPI	3	0	0	90	40 65	100	100 100	0	0	100	100 100	100	100 100
	PPI	6	0	20 10	90	70 80	100	100 100	30	80 55	100	100 100	100	100 100
"	Pre	3	0	0	60	30 45	100	100 100	0	0	100	100 100	100	100 100
	Pre	6	20	50 35	80	80 80	100	100 100	30	70 50	100	100 100	100	100 100
"	Post	3	0	0	0	0	0	20 10	0	0	0	- 0	10	50 30
	Post	6	0	0	0	0	0	80 40	0	20 10	80	- 80	30	80 55
R 16194	PPI	3	0	0	80	70 75	100	100 100	0	60 30	90	100 95	100	100 100
	PPI	6	10	40 25	90	90 90	100	100 100	80	90 85	100	100 100	100	100 100
"	Pre	3	0	0	50	70 60	70	100 85	0	0	100	90 95	100	80 90
	Pre	6	40	70 55	80	90 85	90	100 95	50	90 70	100	100 100	100	100 100
"	Post	3	0	0	0	20 10	0	0	0	0	100	100 100	100	20 10
	Post	6	0	0	0	30 15	20	50 35	20	50 35	100	100 100	50	70 60
R 12001	PPI	2	0	0	20	30 25	0	0	90	90 90	0	0	0	0
	PPI	4	0	0	20	30 25	0	30 15	100	90 95	0	0	0	0
"	PPI	6	0	0	20	80 50	0	50 25	100	100 100	0	0	0	0
Sutan + R 15302	PPI	3+1	0	10	80	80 80	100	100 100	60	90 75	100	100 100	100	100 100
	PPI	3+2	50	50 50	90	90 90	100	100 100	80	90 85	100	100 100	100	100 100
Sutan + R 15431	PPI	3+1	0	0	90	100 95	100	100 100	60	90 75	100	100 100	100	100 100
	PPI	3+2	20	50 35	90	100 95	100	100 100	70	100 85	100	100 100	100	100 100
VCS 438	Pre	2	0	0	90	100 95	90	80 85	10	70 40	90	100 95	90	90 90
	Pre	3	0	0	90	100 95	90	100 95	30	90 60	90	100 95	90	90 90
Preforan	Pre	3	30	0 15	100	100 100	70	80 75	60	90 75	90	100 95	100	100 100
	Pre	6	50	20 35	100	100 100	80	90 85	90	100 95	100	100 100	100	100 100

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		I	II	Ave.	I	II Ave.	I	II Ave.	I	II Ave.	I	II Ave.	I	II Ave.
Bay 86791	Pre	.5	30	20	25	80	90	85	10	0	5	30	50	40
"	Pre	1.0	80	80	80	90	90	90	70	80	75	80	100	90
Hoe 2933	Pre	.5	0	0	0	70	50	60	0	0	0	30	20	25
"	Pre	1.	10	0	5	90	80	85	20	10	15	80	50	65
"	Pre	2.	0	0	0	100	90	95	50	30	40	100	70	85
ACD 15000	Pre	2	0	0	0	90	60	75	0	0	0	100	90	95
"	Pre	4	0	0	0	100	90	95	10	0	5	100	100	100
ACD 15014	Pre	2	0	0	0	90	80	85	0	0	0	100	100	100
"	Pre	4	0	0	0	100	90	95	10	20	15	100	100	100
Amchem 68-72	Pre	1	10	0	5	80	0	40	0	0	0	80	80	80
"	Pre	2	30	10	20	100	70	85	0	0	0	100	100	100
"	Pre	4	70	10	70	100	90	95	10	10	10	100	100	100
NC 8438	Pre	1	0	0	0	90	50	70	10	50	30	0	0	0
"	Pre	2	0	20	10	90	70	80	70	70	70	50	20	35
"	Pre	4	60	50	55	100	80	90	90	90	90	90	80	85
TH 469	Pre	3	0	0	0	10	40	25	0	0	0	100	100	100
"	Pre	6	0	0	0	50	70	60	0	0	0	100	100	100

Seeding Date May 3, 1969

Treatments Applied Preplant May 2
 Preemergence May 6
 Postemergence June 3

Stage of growth at Post application = Corn - 6-8 leaves, Foxtail - 5 inches, Pigweed - 7-10 leaves, Lambsquarter 6 leaves, Night Shade 8-12 leaves, and Smartweed 4-10 leaves.

Date evaluated June 17, 1969