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### SOYBEAN YIELDS—1974

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Twenty-four soybean varieties recommended for growing in north-central United States and adjacent areas in Canada were grown for yields comparisons at the Washington State University Irrigated Agriculture Research and Extension Center Roza and Royal Slope units in 1974. Trials were seeded in early May in 22-inch rows at the rate of one seed per inch of row which is equivalent to 285,000 plants per acre. Seed was inoculated with nitrogen-fixing rhizobia before planting. At harvest, stands averaged 45 and 53 percent of those seeded for the Roza and Royal Slope trials, respectively.

Yields and relative maturities are shown in the table. Yields are in 60 pound bushels per acre at 13 percent moisture. Each figure represents an average of eight determinations—four from each trial—with each determination based on 40 feet of row. Yield plots were hand-harvested. Losses due to commercial harvesting and cleaning were not determined but could reach 10 percent.

Seventeen varieties yielded more than 50 bushels per acre with the highest, Wilkin, averaging 59 bushels per acre. Two of the varieties—Acme and Disoy—had less than 15 percent emergence and yields were not taken. Three additional varieties—Chippewa-64, A-100, and SRF 100—had less than 40 percent stands at both sites when harvested. Yields of these three were probably affected by the low stands.

The fall season in 1974 at both locations was mild and dry. Frost in October damaged but did not completely kill the soybeans. In most years, a variety which matures later than October 1 would be a risk; one maturing by mid-September would be safer. Apart from the frost hazard, late harvesting increases the possibility that rain or high humidity will make it difficult to get the soybeans dry enough to combine. Soybean stems remain green for varying periods after the pods are ripe, particularly with later maturity. Harvest dates reported in the following table are for the ripe pod stage.

Soybean yields are particularly sensitive to moisture stress after the start of flowering. The variety yield trials summarized in the table were rill-irrigated at 7-10 day intervals during the hot weather period following the start of flowering to avoid stress.

In a 1974 sprinkler-irrigated trial at the Roza unit (not reported here), soybeans used between 18 and 24 inches of water with varietal maturity influencing the total amount.

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**Average Yield and Time of Harvest for 22 Soybean Varieties Tested  
in 1974 at the WSU—IAREC Roza and Royal Slope Units**

Variety	Maturity	Time of Harvest		Yield in bu/a *
		Royal Slope	Roza	
Portage	00	9/4	9/11	56.0
Altona	00	9/4	9/5-9/13	54.7
Norman	00	9/4	9/13	56.5
Ada	00	9/6	9/13-9/15	51.2
Morsoy	-	9/6	9/15	52.2
Clay	0	9/17	9/15-9/19	56.6
Wilkin	0	9/17	9/19-10/1	59.0
Swift	0	9/23	9/25	53.4
Flambeau	00	9/23	9/24-10/1	50.7
Merit	0	9/23	9/24-10/1	54.1
Traverse	0	9/23	10/1-10/18	56.9
SRF 100	-	9/23-9/26	10/1-10/4	45.1
Wirth	1	9/26-10/9	10/1-10/18	49.9
Chippewa 64	1	10/9	10/4	39.1
Steele	1	10/9	10/18	51.6
Hark	1	10/9	10/18	50.0
Rampage	1	10/9	10/18	45.6
SRF 70-554	-	10/9	10/18	52.6
SRF 150	-	10/9-10/11	10/18	52.2
SRF 174AT	-	10/9-10/11	10/18	53.0
A-100	1	10/24	10/18	45.7
SRF 69691	-	10/24	10/18	51.0

\* Yields are in 60 lb. bushels at 13% moisture. LSD (.05) = 5.2 bu/a.

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