

## SOYBEAN POTENTIAL IN MASSACHUSETTS

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Soybean seed yields from research in recent years have been encouraging. Yields of beans corrected to 12.5 percent moisture were: 1972, 37 bushels per acre (1 variety); 1975, 34-38 bu/ac (2 varieties); 1976, 29-61 bu/ac (7 varieties); 1979, 32-73 bu/ac (7 varieties). Harvesting losses in commercial operations might be expected to reduce these yields by 10-15%.

Variety yields in 1979, assuming 15% harvesting loss, are presented in Table 1. The first sowing of the varieties was June 1. These soybeans were harvested October 3. The second sowing made June 10 was harvested October 16. Massachusetts falls in the group I maturity zone but sometimes group I beans will fail to mature before frost.

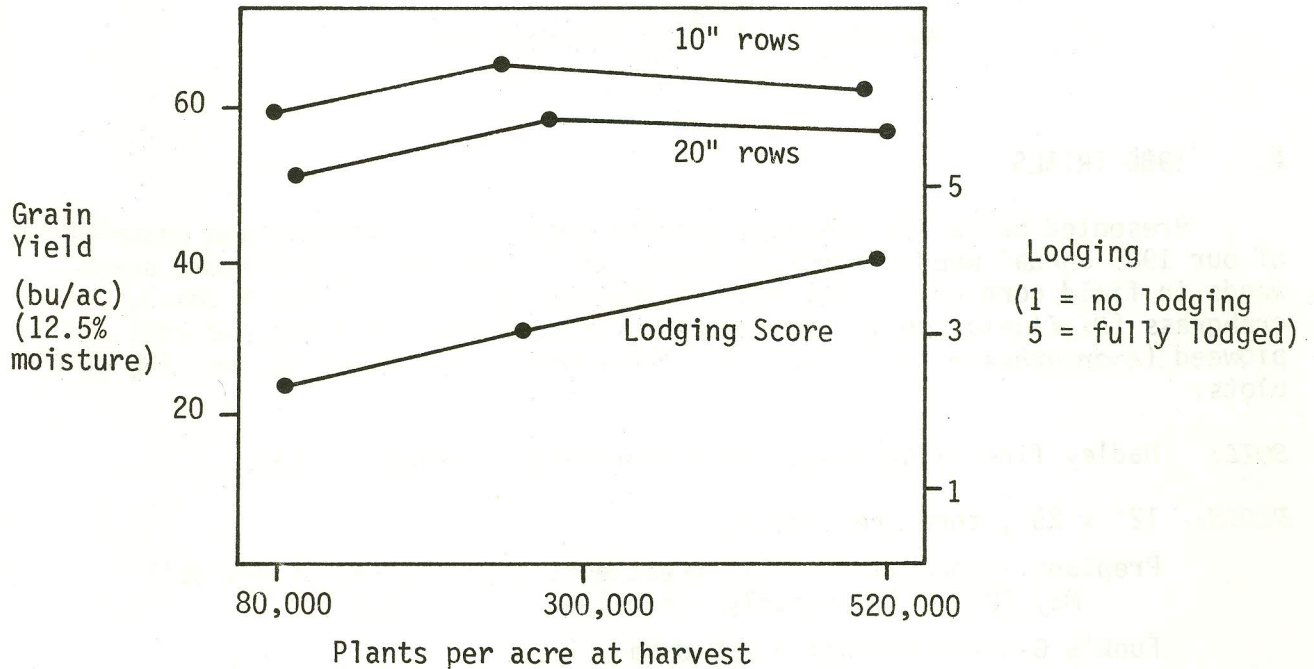
Table 1. Soybean variety seed yields, 1979.

Variety	Maturity Group	Sowing 1	Sowing 2
Corsoy	II	62 bu/ac	*
Evans	0	59	40
Harsoy	II	57	*
Rampage	I	55	39
Chippewa	I	50	28
Wells	II	45	*
Altona	00	40	27

\* Variety did not mature before frost.

In a row width-density experiment sown with Evans soybeans May 29, 1979, and harvested September 27-28, seed yields were increased by 12% when row width was narrowed from 20 inches to 10 inches (Figure 1). This response is typical of soybeans grown in the northern states. While plant density had no significant effect on seed yield increasing plant density increased lodging which would likely lower recoverable beans in commercial fields. It should be noted that a severe storm late in the season accentuated lodging.

Fig. 1. Seed yield and lodging characteristics of Evans soybeans.



The increased yield from narrow rows can be largely explained in terms of increased pod numbers of plants grown at the 10 inch row width (Table 2). At all densities plants from 10 rows had more pods compared to plants in 20 inch rows at an equivalent plant density. The minor differences in seed yield among densities can also be attributed to differences in pod numbers per plant (Table 2). Differences in other yield components were minor compared with pods per plant.

Table 2. Seed yield components of Evans soybeans.

Row Width or Density	Harvested Plants Per Acre	Pod Number Per Plant	Seed Number Per Pod	1000 Seed Wt (ounces)
10 inch rows	285,310	36.3	2.23	4.51
20 inch rows	299,879	30.4	2.25	4.34
Low	84,176	65.8	2.30	4.41
Medium	274,383	22.7	2.26	4.44
High	518,818	11.7	2.18	4.51