

Soybean Production in Michigan

By Z. R. Helsel¹, T. J. Johnston², and L. P. Hart¹

¹Departments of Crop and Soil Sciences (Formerly) and ²Botany and Plant Pathology

ADAPTATION

Soybeans are adapted to a wide range of climatic and soil conditions. They are currently being grown most extensively in the southern half of the lower peninsula. However, recent experiences have shown that excellent yields, up to 40 bu./acre, are possible in northern Michigan using new short-season varieties. Soybeans can be grown on almost any soil, with the exception of some muck soils that are poorly drained or very susceptible to frost. Because of diseases, growing soybeans in fine-textured, poorly-drained soils can also cause problems. In some respects, soybeans are more drought tolerant than corn. Soybeans flower over a longer period of time, and if sufficient vegetative growth occurs, can produce good yields even after extended periods of dry weather.

ROTATION

Because of potential disease problems, soybeans should be rotated often. Do not grow soybeans in a rotation more than 2 years in a row unless disease resistant varieties are available. Corn or wheat are the preferred crops for rotation with soybeans. Soybeans should not follow dry beans or alfalfa in the rotation. Some diseases of dry beans, like white mold, can carry over to soybeans. With alfalfa, the extra nitrogen that is available for the following crop is utilized better by corn or wheat. Serious disease problems in soybeans may force a field out of soybeans for 4 or more years to reduce potential disease problems, especially when resistant varieties are not available.

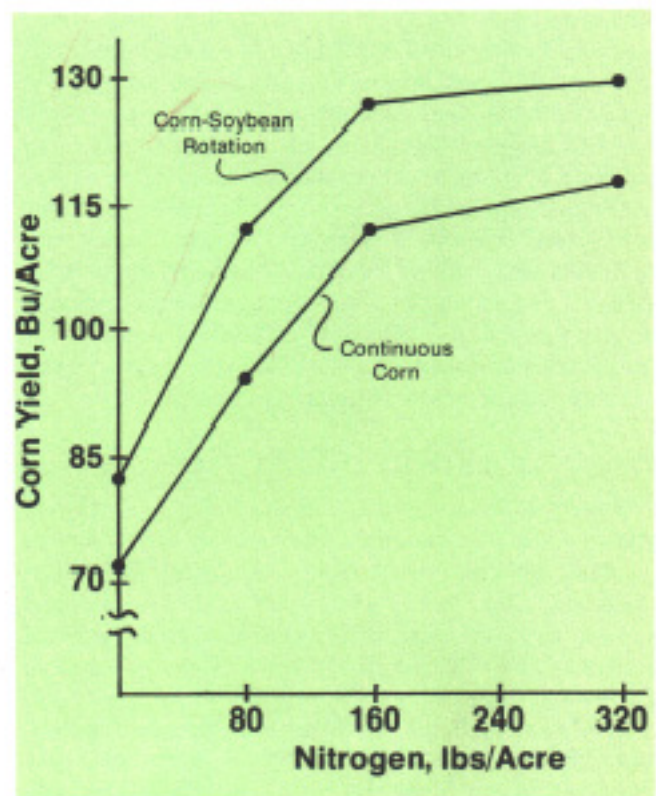


Figure 1. Effect of soybeans on corn in the rotation.

Source: Walsh, L. F. 1977. "Soybeans Good for Corn." *Soybean News*, 28(3):4.

A corn-soybean rotation is excellent for both soybeans and corn. Figure 1 shows that corn following soybeans out-yields corn following corn in a rotation. This is true at all nitrogen levels on corn. Soybean yields following corn are also higher than yields of soybeans following soybeans.