

soybean cultivation

Soybean is a species of legume native to Eastern Asia such as China, Taiwan, and Korea.

During the Chou Dynasty (1134-246 BC) the soybean was designated one of the five sacred grains, along with barley, wheat, millet, and rice. Cultivation of the soybean only began largely in the United States after the Second World War, up to 140 billion pounds per year.

The soybean is an annual plant that may vary in growth habit and height. It may grow prostrate, not growing higher than 8 inches, or even stiffly erect up to 6.5 feet in height. The pods, stems, and leaves are covered with fine brown or gray pubescence. The leaves are trifoliate, and the leaflets are 2-6 inches long and 1-3 inches broad. They fall before the seeds are mature. The small, self-fertile flowers are borne in the axil of the leaf and are either white or purple. The fruit is a hairy pod that grows in clusters of 1-3 inches long and usually containing 2-4 seeds 5-11 mm in diameter.

Field preparation

The soil should not be too dry at the time of seedbed preparation. Inadequate moisture will result in poor seed germination. Usually, the field needs to be irrigated 3-4 days prior to sowing to ensure sufficient moisture in the soil for good germination of seed. Prepare 20-cm raised beds spaced one meter apart from center of one bed to the center of the next.

Water management

Maintaining proper soil moisture throughout the growing season is important for good quality pods. Usually, first irrigation is needed within a week after sowing under appropriate soil conditions. Irrigation is done in furrows. Depending upon weather and soil moisture conditions, the irrigation is continued at 10-15 day intervals until the pods are well developed. However, irrigating the crop is essential at critical periods such as flowering and pod filling stages.

Harvest

Harvesting is done when 80% of the pods have reached physiological maturity stage. It may take 65 to 75 days after germination for soybeans to be ready for harvest depending upon variety, temperature and weather conditions. The pods are still green. In Taiwan, harvesting usually begins at midnight when dew and cool temperature help to preserve the green color and freshness of the vegetable soybeans. When harvested in daytime, the plants are kept under the shade. The pods are stripped from the plants by hand. Harvesting machines can save labor, cost and time.

