

Growing Lima Beans for the Canning Factory

By GEO. E. STARR

The lima bean crop requires a warm growing season. It thrives best where there is ample rainfall and a comparatively high humidity. Certain sections of Michigan where these conditions prevail are admirably adapted to the growing of this crop and hence, it is becoming one of the important canning crops in this state.

There are a number of reasons which make the lima bean a valuable crop for the grower in sections of Michigan to which it is adapted. It furnishes a quick cash crop. The price is guaranteed in advance and is not subject to fluctuations. A "bumper" crop cannot depress the price paid for the product, and thereby one crop risk is eliminated. It develops a much greater and deeper root system than does the field bean and most of these roots are left in the soil at harvest time. It is harvested in an immature state, and if the crop residues are returned to the soil there is little loss in soil fertility.

There is less hazard in harvesting than there is with field beans because the crop is harvested early and is seldom damaged by rain or frost. The crop is removed in ample time to plant a fall crop of grain, which makes possible the rapid preparation of an ideal seed bed by means of the disc and harrow. Silage made from the green vines and pods is a valuable food for live stock. The labor in growing this crop up to harvest time is no greater than that of growing a crop of field beans, and although there is somewhat more bulk to handle at harvest, it is quite likely that the extra labor is more than compensated for by the decrease in crop hazards.

Soil—Select a fertile loam, silt or gravel loam, which is well supplied with humus, well drained, but retentive of moisture. If possible, a good clover sod should be plowed down for this crop.

Plow deeply in the fall and start the preparation of the seed bed as soon as the soil may be worked in the spring. Fit the seed bed thoroughly. Go over the field with a harrow or disc at least once per week until time for planting. Use a roller, or cultipacker if necessary to pulverize and properly fit a loose or cloddy soil. Thorough use of the harrow at intervals of a week before planting time serves a

MICHIGAN STATE COLLEGE
Of Agriculture and Applied Science

EXTENSION DIVISION
R. J. Baldwin, Director

Printed and distributed in furtherance of the purposes of the co-operative agricultural extension work provided for in the Act of Congress May 8, 1914, Michigan State College of Agriculture and Applied Science and U. S. Department of Agriculture, co-operating.

three-fold purpose. It prepares a fine, well settled, moist seed bed which induces uniform germination of the seed; it destroys millions of weed seedlings and thus reduces the labor in keeping the crop clean, and it thoroughly mixes and incorporates any applied fertilizer with the soil.

Manures, Fertilizers, and Lime—Apply stable manure if available at the rate of 10 to 15 tons per acre before plowing in the fall. Supplement this with 300 to 500 pounds of a commercial fertilizer high in phosphorous, applied broadcast and mixed thoroughly with the soil a short time previous to planting. If manure is not available use 300 to 500 pounds per acre of a high grade complete fertilizer such as a formula 4-8-6 or 4-16-4. If the soil is acid, apply lime as its need is indicated by a test of the soil. Broadcast the lime on the plowed surface and thoroughly mix with the top soil.

Planting—Plant the crop after the ground is well warmed up in the spring. The planting range of season may be between May 25 and July 10. Cooperate with the canner in arranging planting dates so that there may be a normal spread of the harvest period over the canning season.

Use a grain or bean drill to plant 45 pounds of seed per acre in continuous rows 28 inches apart or plant four to six seeds per hill with check rower or hand planter in hills 24 inches apart each way. The latter method is especially recommended for the lighter soils or where the fields are weedy or grassy. Certain of the leading canners advise the use of the check row method for all plantings of lima beans.

Do not plant too deeply. If covered too deeply many seedlings fail to reach the surface. Deep planting is responsible for many crop failures. Two inches is the maximum safe depth in light soils and one inch is to be preferred. If the seeds are only lightly covered there is a more rapid and uniform germination and usually a much better stand, provided that the seed bed has been properly fitted.

Variety and Seed—The Henderson Bush Lima is the best variety for use in Michigan. This is productive, small seeded, and makes a high quality canned product. Plant clean plump seed of high germination. Seed is usually supplied by the canner and it is to the mutual interest of both the grower and canner that good seed from high yielding strains be planted.

Cultivation—The first cultivation should be made as soon as the seedlings are sufficiently developed to permit easily following the rows. Cultivation may be fairly deep at first and close to the row. Succeeding cultivations should follow at weekly or ten day intervals until the crop is "laid by." These should be shallow to avoid damage to feeding roots near the surface of the soil.

Harvesting—Harvest the crop with a bean harvester when it has reached the proper stage of maturity and draw at once to the viner station. The field man for the canning factory will inform the grower when his crop is ready for harvest.

It is common for a crop of lima beans to average at least 1500 pounds per acre. Under favorable growing conditions and with the best of care, it is possible to obtain a yield as high as 4000 pounds or more per acre.