

Yield

Improved agronomic practices can produce tender cobs (baby corn with husk) about 4-5 t/ha and 20-25 t/ha green fodder. Baby corn has only 30-35 per cent recovery (*i.e.* 300-350 g of tender cob is obtained from one kg baby corn).

Economics

Cost of cultivation: Rs.32,500/ ha

Gross returns: Rs. 1,02,500/ ha

Net returns: 72,500/ ha

B:C ratio: 2.23



De-husking

De-husking should be done with proper care and pointed end of thin knives so as to lightly slit baby corn length. Then, use knives to cleave around the bigger end of baby corn, and husk it along slits on ears but care should be taken not to damage inner spikes. All silk should be removed properly and then place cleaned baby corn in clean packing material.

Grading

Baby corn should be sorted according the grades which are normally based on the length and diameter of the corn. Baby corn can be sorted and graded by machine or manually. The grades of baby corn are (i) Large size: 10-12 cm long and 1.3-1.4 cm diameter, (ii) Medium size: 6-10 cm long with 1.2-1.3 cm diameter and (iii) Small size: 5-7 cm long with 1.0-1.2 cm diameter.

Packaging

Packaging is necessary for fetching better price, easy handling, transportation and storage. The material used for packaging must be new, clean and of good quality to avoid any external or internal damage to the produce. De-husked baby corn is packed in perforated polybags, thermocol trays covered with cellophane, tin, glass bottles. Glass packing is the best having 52 per cent baby corn with 48 per cent brine solution for longer time of preservation.

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BABY CORN PRODUCTION TECHNOLOGY



NICRA
National Initiative on Climate Resilient Agriculture



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What is baby corn?

Maize cobs harvested within 2 to 5 days after their emergence are called baby corn, while the ears are still immature. The ears/cob meant for baby corn is not allowed to fertilize and set seed. These are used in spicy food preparations, soups and Chinese preparations *etc.* Baby corn can be canned in 2 per cent brine solution. It is a cash crop, which offers a premium price to the farmers as compared to field corn, provided there is either a good market or processing unit nearby.



Production systems

There are two different methods of producing baby corn. (i) Baby corn is the primary crop and a variety is selected to produce only baby corn. (ii) Baby corn is the secondary crop in a planting of sweet corn or popcorn or field corn, and the variety is selected to produce either sweet corn or popcorn or field corn.

Soils

Clay loam to sandy loam soil having pH value 5.5-7.5 is best suited to baby corn cultivation though it must be well-drained, well-aerated, containing adequate organic matter and well supplied with available nutrients. Highly alkaline and acidic soils are not suitable for baby corn cultivation.

Field preparation

One deep ploughing followed by 1- 2 harrowing/tilling should be done for obtaining good tilth, which makes seed and soil contact for easy absorption of moisture and sufficient aeration, resulting in proper germination and emergence of maize.

Nutrient management

Well-decomposed FYM @ 5 t/ha + vermicompost @ 1 t/ha should be applied 20 days before sowing of crop for obtaining higher yield. Apart from that the seed of baby corn should be inoculated with N fixing non-symbiotic microorganism like *Azospirillum*, *Azotobacter etc.* and phosphorus solubilizing bacteria (PSB) @ 20 g/kg seed.

Season

Since there is no necessity for pollination and seed setting, 2-3 crops can be grown up in a year. Staggered sowing at monthly interval i.e., February-March (pre-kharif crop) and April-May (kharif crop) and June-July (late kharif) is ideal.

Varieties

Though all varieties are suitable for baby corn but varieties that bear more than one cob/plant, with more sugars and nutrients are preferred. Cultivars like Madhuri sweet corn, Priya sweet Corn, Amber popcorn, VL-42, VL 45, MTH 14, HIM-129, Golden Baby, PAC 793, VL Baby corn 1, G-5416, MH-4 which produces more cobs per plant than other maize varieties.

Seeds and sowing

A population of 1,00,000-1,10,000 is sufficient for high yield of baby corn; for this quality seed @ 18-20 kg/ha should be sown on ridge with a spacing of 15 cm between plant to plant and 45 cm from row to row. About two seeds per hill should be sown at a depth of 4-5 cm and thinning of one plant may be done after 8-10 days of germination to give the required population.

Weeding

Weeding is an important operation to boost crop productivity. The critical period of crop weed competition is 45 days after sowing in maize, so up to that period crop should free from the weeds. Weeding is an important operation to boost crop productivity. Two hand weeding is recommended at 15th and 45th day after germination followed. Earthing may be done after second weeding to protect the plant from lodging.

Cropping system

It is better to grow leguminous crop as an intercrop in baby corn which makes it more remunerative. In general, short duration varieties of intercrops are preferred for intercropping with baby corn. Crops like urd bean, soybean and cowpea *etc.* are best suited with baby corn.



Water management

In baby corn, 15-20 days after sowing, knee-high stage and pre-flowering are the critical stages of irrigation. Excess water and water stress is equally or even more harmful as the crop cannot tolerate stagnant water and is very sensitive to water-logging. Water stagnation even for 6-7 hours in baby corn fields almost spoils the whole crop. Therefore, efficient drainage is of great significance than irrigation in Sikkim.

Detasseling

Removal of male inflorescence soon after its emergence is called detasseling. This process is very crucial in baby corn to maintain its quality. It should be practiced row-wise. While detasseling, leaf should not be removed which will otherwise affect net photosynthesis and ultimately reduce average baby corn yield. The male inflorescence can be fed to cattle, as it is more in nutrient status.



Maturity

Depending on the place time and of cultivation, 50-55 days after sowing, 3-4 small shoots (ears of 10 to 15 cms long) can be seen in each baby corn plant. Couple of days later, the silk emerges and the shoots are ready for harvest. Within 24 to 48 hours of reaching this stage (called silk emergence stage), the shoots should be harvested. At this stage, the shoots with husk are about 15-20 cms or ear size is 8 to 10 cm long, 1-1.5 cm in diameter and weigh 7-8 g. The colour of ear is golden yellow.



Harvest

Baby corn is ready for harvest after 50-60 days after sowing. For baby corn as a primary crop, harvest all ears within 1-2 days after silk emergence. The high density planting allows production of more and high quality ears per unit area. Harvest can be made 8-10 times over a period of 3-4 weeks. After 8 or 10 days of first harvest, second and third cobs will be ready for harvesting. For baby corn as a secondary crop, harvest the 2nd and 3rd ears leaving the bottom most ears to mature for sweet corn or popcorn or green cob. This method allows farmers to use the secondary ears which otherwise may not mature for green cob or sweet corn or popcorn production. Small cobs are to be harvested immediately a day after silk emergence without damaging the plant. Harvest can be made 8-10 times over a period of 3-4 weeks. Small cobs are to be harvested immediately a day after silk emergence without damaging the plant. About 1,00,000 shoots can be harvested from an hectare if, optimum population is maintained.

