

**REPORT ON PRELIMINARY SURVEY OF SQUASH (*Chayote edule*) CONDUCTED AT LAITKSEH,
WEST KHASI HILLS DISTRICT ON 19TH MARCH, 2014 BY MIE, SHILLONG AND SIRD,
MEGHALAYA.**

On the 19th March 2014, a team from MIE Shillong and SIRD, Nongsder, led by Shri. E. Shanpru, OSD, MIE, along with Ms. L. Dkhar, Faculty Member, SIRD, Shri H. Chulet, Intern, MIE and Ms. F. Basaiawmoit, Intern, MIE, proceeded to Laitkseh village for preliminary survey on cultivation of squash in the area. Laitkseh village falls under Mawthadraishan C&RD Block, West Khasi Hills District which is approximately 85 km from Shillong. The Laitkseh village is divided into two villages i.e. Upper Laitkseh and Laitkseh villages. There are 190 households in Upper Laitkseh and 215 Households in Laitkseh village. Land tenure system at Laitkseh is based on 'Kur' system and the land is donated to the villagers by the 'Marngar Kur' for inhabitation and agricultural purpose.

Cultivation of squash at Laitkseh and the neighbouring villages was introduced around 20 years ago and at present it is cultivated by every household. Seed sharing of squash is practiced among the cultivators. The common varieties grown are light green variety, which is mostly preferred by the villagers, round dark green variety and spiny variety. Squash is cultivated as a kitchen garden crop by all households and about 85 % of the households also cultivate in the field outside the village. The average area under squash cultivation at kitchen garden in each household is around 300 Sq.m with 2 plants/300 sq.m while the average area of the field outside the village is 1200 sq.m

Field Preparation and Planting:

Two pits for every 300 sq. m are prepared for new planting of squash. Each pit of 2ft x 2ft x 1ft is filled with FYM/ cowdung and DAP at the time of planting. The germinated fruit is planted in the pits prepared in the month of February. Ratooning of squash is usually followed for 3 years. For maintenance of the ratoon crop, the dried stems and leaves are removed from the parent plant followed with a light earthing up around the plant and the plant is protected with bamboo and gunny bags. The trellis is constructed at a height of 5 ft with bamboo in the month of February to March.



Picture 1: Squash trellis with bamboo material.

Manures and Fertilizers:

Generally Farm Yard Manure, Cow dung, DAP are applied around the plant in the month of January to March and every month after first harvest.

Weed Management:

In the month of May, weeding is done and the weeds are used as a mulching material. Herbicide application is not practiced in squash cultivation.

Intercropping;

Intercropping is not practiced but crop rotation with mustard, cole crops and leguminous crops is sometimes practiced in the field.

Water Management: Rainfed

Pest and Disease Management:

Aphids are the common pest which infests the young shoots, stems and leaves of squash plant. Cases of white grub infestation are also reported. Management of the above mentioned pests is negligible due to lack of knowhow.

Diseases are not observed in the squash fields. However, it was reported that flower and fruit drop was observed in small proportion.

Harvesting:

Harvesting of squash starts from the month of June till October. Harvesting is done by hand picking twice per week from June to September. The average production from 300 sq m field is 200 kg per week. The tubers (roots) are also harvested after 3 years of ratooning. The average root yield is 10 kg per plant which is sold at Rs 10/kg for consumption purposes.

Storage:

Storage of squash is not done as it is sold right after harvesting. However, the cultivators reported that squash cannot be stored for more than two days after harvest.

Marketing:

The produce is sold to the commission agents of the traders/ middlemen at the village which is further marketed to Guwahati, Siliguri and Halflong. The price of the produce varies from Rs 15-20 per kg during the months of June and July and Rs 8-10 per kg during the months of August and September, while in October the price falls to Rs 2/ kg. The price of squash is controlled by the traders/ middle men. The commission agents earn a commission of Rs 1000/- for every 3 tonnes of produce sold. The cultivators have little knowledge on the value addition and market chain of the produce.

Cost involved in cultivation of squash:

- Bamboo- 20 nos. of bamboo/ 300 sq.m / year

Rs 70/pole (30-40 ft)

Rs 35/pole (small)

- Mandays required:

Season	Time	No. of mandays	Cost
March to June	1hour/day for care and maintenance	12 mandays	
July – October	4 men once per week during harvesting time	16 mandays/month	16x300 = 4800 per month
June to September	1 manday/ week for defoliation	4 mandays/ month	4x 150 = 600 per month

- Head load rate: Rs 20 per bag (50kg) from the field.

Issues and Prospects:

The cultivators expressed the need of an aggregation or collection centre for marketing of squash as the producer have neither control nor the knowledge of the price of the produce. By setting up of the aggregation centre, the producers felt that the variation of prices could be avoided. It was reported that intervention from the Block Office was initiated regarding the proposal of setting up of processing unit for squash in the area. However, during the interaction with the villagers and the Headman of Laitkseh village, they expressed their doubt about the feasibility of the proposal.

A Farmer's club was formed last year for promoting and marketing of produce. Members of the club are Marngor, Langlew, Mawlaisyiem, Upper Laitkseh, Laitkseh, Mawkhan, Mawkhan Wahkwang, Mawkaton and Nongkasen villages. These villages are within 5 Km radius and all of these villages are involved in squash cultivation.

It was reported that provision of trellis was made by the Office of the District Horticulture Officer for 2-3 beneficiaries. However, the trellis net is not suitable because the spacing of the net is too small and adversely affects the fruit formation.



Picture 2 & 3: Squash trellis with wire mesh material and cement poles.