

**Yard Long Bean (*Vigna unguiculata* L.) variety *ArkaMangala* :**  
**A good source of high income generation for a farmer of Bishnupur district, Manipur**

### Farmer's Profile

The farmer's name is Shri Chongtham Khogendro Singh, son of Ch. Tomcha Singh, aged 47 years residing in Khoijuman Mayai Leikai, Bishnupur district, Manipur.



### Challenge/ Background

Shri Ch. Khogendro Singh is a practicing vegetable farmer residing in Khoijuman village, under the Bishnupur block. He is a graduate and owns an area of 1 hectare of land where he practices vegetable - based farming. In 2024, he is growing seasonal vegetables such as tomato, chilli, brinjal, cucumber, french bean, yard long bean, cauliflower and others. Khoijuman village is known as the vegetable belt of Manipur. Many farmers in Bishnupur district have started including yard long beans in their cropping system as a source of income generation.

### Problem

The farmers of Bishnupur district are growing yard long beans, with most of the varieties being imported from Thailand, China, and Myanmar and are readily available through authorised dealers in Manipur. These varieties are generally of short duration and have short shelf life. Furthermore, the farmers are using seeds that are procure themselves, without following any Scientific method of seed production. As a result, there are issues with yield fluctuation and a lack of introduction of institutional agriculture/horticulture seeds of many crops including yard long beans.

### KVK intervention

After identifying and understanding the problems faced by farmers during and after yard long bean cultivation, four farmers were selected from three villages viz, Khoijuman, Bishnupur ward No.11, and Leimaram Heinoubok. To address the challenges faced by yard long bean growers, the Subject Matter Specialist–Horticulture at Krishi Vigyan Kendra (KVK), Bishnupur district, Manipur, submitted a proposal for conducting On-Farm Testing (OFT) at farmers fields. The specific OFT, entitled *Performance of Yard Long Bean variety ArkaMangala* was included in the Action Plan for 2024 of KVK-Bishnupur district, Manipur.

Before implementing the OFT programme, a one day ON- Campus training programme was held at the KVK Training hall in Bishnupur district, Manipur focusing on the scientific cultivation of yard long bean variety *Arka Mangala*. The details of the technology shared were as follows.

- **Yard long bean variety** : *ArkaMangala*
- **Seed Rate** : 25kg/ha
- **FYM** : 5 tonnes/ha
- **NPK Fertilizer** : 30kg, 60kg and 50kg/ha
- **Spacing** : 45cm x 15cm

One kilogram of *ArkaMangala* seed was distributed to each of the four selected farmers for conducting OFT on their fields.

## Observation

Shri Khogendro Singh conducted the OFT programme on his field, which covered an area of 625 sq.m. The sowing was done on 28<sup>th</sup> July 2024. At his OFT field, he observed that the 1st flowering occurred at 42 days after sowing and 50% flowering was observed at 49 days after sowing. The first harvest was done at 58 days after sowing, with subsequent harvests occurring at intervals of 3-4 days. Altogether 18 harvests were recorded. The peak harvest of 122kg was recorded on 31<sup>st</sup> October.

He further reported that there was no severe incidence of insect pests and diseases in his *ArkaMangala* field. He observed only minimal incidences of aphids and pod borer which could be easily controlled. Additionally he mentioned that some of the young, fresh leaves were harvested and sold in bundles at the local market, as the local people traditionally cook and consume them with dry fish or as a vegetarian dish.

Shri Khogendro Singh also noted that the leaves of *ArkaMangala* were very thick and dense compared to previous varieties of yard long beans. He concluded that the farmers could earn additional income from the sale of the leaves as well.

## Social impact

The *ArkaMangala* field of Shri Khogendro was found to be more impressive than others fields so a Field day on the Performance of Yard Long Bean variety *ArkaMangala* was conducted at his field on 27<sup>th</sup> September 2024 to witness the fruiting of variety. The programme was organised under the guidance of Dr. P. Bijaya Devi, Subject Matter Specialist –Horticulture, KVK Bishnupur district. Smt. S. Sushilla Chanu, District Officer, Department of Horticulture and Soil Conservation, Bishnupur District, Manipur was the special invitee for the Field Day Programme.

Farmers from neighboring villages and different parts of Bishnupur district participated in the programme with dedication. A total of 30 farmers attended the Field Day. 22 (twenty-two) were male and 8 (eight) were farm women. The *Arka Mangala* field of Shri Khogendro Singh greatly impressed the participants who showed interest in growing in their own fields. This perfectly reflected the Motto “Seeing is believing” and the Field Day programme served as an effective extension tool for the area expansion of new technologies.

Feedback on the technology and performance of Yard long bean variety *ArkaMangala* was collected from Shri Khogendro Singh through DD Manipur and the coverage was broadcast on 3<sup>rd</sup> December 2024 via DD Imphal.

## Result and outcome

The cumulative yield of 1580 kg was obtained from his field with an area 625 sq.m. over a duration of 4 months. The cost of production for his *Arka Mangala* cultivation was Rs 9,800 (Nine thousand eight hundred) only. He earned a gross return Rs 69,520 (Sixty-nine thousand five hundred and twenty) by selling the *Arka Mangala* pods at Rs 44 per kg. The net return from an area of 625 sq.m. was Rs 59,720 ( Fifty-nine thousand seven hundred and twenty )

## Impact of the technology/Remark

The Yard Long Bean variety *ArkaMangala* can be adopted for Front Line Demonstration programmes at farmers' fields in Bishnupur district, Manipur as a source of high income

generation. Many farmers in Bishnupur district are interested in incorporating *ArkaMangala* into their vegetable-based cropping system. It is certain that the Yard Long Bean variety *ArkaMangala* will help uplift the economy of the farmers in Bishnupur as the market value of this high value bean remains relatively consistent throughout the year.



Fig 1: OFT on Varietal performance of yard long bean var. *ArkaMangala*



Fig 2: Harvesting of yard long bean var. *ArkaMangala*



Fig 3: SMS-Horticulture, KVK-Bishnupur with Shri Khogendro and farm women.



Fig 4: Field day programme in presence of District officer, Department of Horticulture and Soil Conservation, Bishnupur, Manipur





Fig 5: Harvested *ArkaMangala* with the farmer Shri Khogendro Singh



Fig 6: District Officer & SMS-Horticulture observing the pods of *Arka Mangala*



Fig 7: Loaded *ArkaMangala* pods for market after field day programme



Fig 8: Bundles of *ArkaMangala* pods for local market



Fig 9: Feed back on Performance of yard long bean var. *ArkaMangala* by Shri Khogendro Singh through DD Manipur and Broad cast via DD Imphal



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