

Success stories/Case studies,

Success story No.1

Title	: Performance of White Pekin duck under backyard system
Problem diagnosed	: Non availability of meat type duck
Technology	: White Pekin Duck (Vigova M. Super)

Introduction:

Duck farming may be a lucrative livestock industry within the globe due to its egg, meat and feather. Ducks is reared for eggs and meat production like chicken. Duck farming has the potential and may take the advantage to interact rural people in duck production. It is an important tool for alleviating poverty among the rural communities and has great potentials in tribal area. As compare to chicken ducks are more prolific and more adaptable to free-range system of rearing. They also grow faster than chicken however; meat type of duck is not easily available.

KVK Intervention:

Keeping in mind the potential and advantages of duck farming, KVK Kohima conducted On Farm Testing (OFT) on White Pekin Duck to assess the performance of white Pekin Duck under backyard system during the year 2022-23. The OFT programmed was carried out in three villages namely Henbenji, Phenwhenyu and Guju under Tseminyu district. Seven farmwomen were selected from the selected villages and trained on duck farming under backyard system and further motivated through a series of group meeting and discussion. Critical inputs like 150 numbers of 6 days old white pekin duckling i.e Vigova M. Super, feeds, digital weighing balance and veterinary medicine and Veterinary services were provided till the completion of the On Farm Testing.

Table1. Performance in terms of growth and mortality in farmer's field

Enterprised Poultry	4weeks (g)	8 weeks (g)	12 weeks (g)	Mortality (%)	Av.daily wt. gain (g)
White Pekin duck	815	1632	2500	Nil*	29.77
Desi/ Pati duck	267	524	787	Nil*	9.37

**during the studied period*

Table2. Technology Output

Enterprise Poultry	Production/unit (nos.)	Net return (Rs.)	B.C Ratio
White Pekin duck	20	9600.00	2.56
Desi/Pati duck	20	2407.00	1.75

Impact of the technology

The farmers sold the birds @ Rs. 400/- per kg, fetching a gross return of Rs. 15750/- with a net profit of Rs. 9600/- per farmer. The impact was assessed to good nutrition, social security, self employment and continue to inspire fellow citizens of the village. The performance of White Pekin Duck was found favourable and promising in term of growth and meat quality as revealed by the farmers



Success Story No.2

Title : Popularization of Carrot variety Pusa Rudhira.
Problem diagnosed : Non-use of organic sources of nutrients which decreases the marketable quality of the produce
Technology : Carrot variety Pusa Rudhira

Introduction:

Carrot is a popular vegetable crop which is fast-growing and high in carotene content. It is a precursor to vitamin A, and have significant amount of Thiamine and Riboflavin. The two main ingredients in carrot flavour are sugar and volatile terpenoids. The Villages in Kohima District, Nagaland has a favourable climate for growing carrots throughout the year with an elevation of above 1500 msl in most of the farming area. In some villages, the Villagers have been cultivating Carrots for the last few years, out of their own interest and due to high demand in the market during offseason but the problem faced by the farmers was poor size of the produce and low shelf life due to which the farmers could not fetch a good price in the market even in the offseason.

KVK Intervention:

KVK Kohima after considering the scope and potential of Carrot cultivation in Kohima district due to the favourable Agro-climatic condition for offseason production, conducted Frontline Demonstration (FLD) by introducing the variety Pusa Rudhira along with their existing variety Kuroda Improved to assess and popularize the improved variety in the District during the year 2022-23. The FLD programmed was carried out in two villages namely Khonoma and Kigwema villages under Kohima district. Ten farmwomen were selected (five each) from the two selected villages. Therefore, for successful production of Carrot in the district, a well-planned strategy which includes soil micro-climate, bed preparation, choice of variety, manuring, seed treatment, marketing and all related technologies were analyzed for ensuring better quality and higher returns to the farmer.

The demonstration was conducted by introduction of new Carrot variety Pusa Rudhira. Training cum Hand-on-demonstration on ploughing of soil to a depth of 30-40 cm was worked to a very fine tilt hand bed preparation by raising bed to 1m wide and 20 cm high for better rooting during sowing of seeds were conducted. The farmers were also trained on the importance of incorporation of biofertilizers, i.e., *Azospirillum* and *Phosphotika* at 25 kg each/ha at the time of land preparation along with organic matter in the soil for quality production. Application of 5g/kg *Trichoderma viride* and 5g/kg *Pseudomonas fluorescens* was also done during seed treatment to control various fungal and bacterial diseases during offseason production. All the recommended cultural practices were followed along with regular monitoring and data collection at different growth stages and yield parameters were recorded till the completion of the demonstration.



FLD being carried out at Kigwema Village & Khonoma Village Harvesting of Carrot being carried out in the farmers' field

Result and Economic analysis:

During the demonstration period, the data recorded indicates the highest yield (13 t/ha), lowest yield (8 t/ha), and average yield (11.5 t/ha) compared to local check (10 t/ha). The percentage of increase in yield i.e., change in average yield over local was 115%. Both the varieties performed well in all the locations however the variety Pusa Rudhira performed better under Kohima district which recorded maximum values in all the yield attributing traits.

Table 1: Performance in terms of various yield parameters over local check and % increase in yield of Carrot under Kohima District.

Demonstration Yield(q/Ha)			Yield of local Check(q/ha)	% increase/ change in avg. yield over local
H	L	A		
130	80	115	100	13.04

Table 2: Technology Output

Crop/Variety	Gross Cost (Rs/ha)	Gross Return(Rs/ha)	Net Return (Rs/ha)	B:C Ratio (GR/GC)
Carrot Var. Pusa Rudhira	60,000	5,75,000	5,15,000	1:9

Marketing, Outcome and Impact:

The farmers sold the carrots @ Rs. 50-80/- per kg (Wholesale), fetching a gross return of Rs. 5,75,000/- with a net profit of Rs. 5,15,000/- for 1 hectare area (Approx. estimation). On an average every farm family with a minimum land holding of 1 acre harvested 40 quintals in one season with better quality of the produce and yield. As organic production is one of the fastest growing food sectors globally and driven by increased consumer demand, the organically managed carrots were free of pesticide residue and assumed to have higher amount of secondary metabolites, vitamins and various mineral nutrients. With the intervention by KVK, Kohima, the eagerness to try improved technology-based cultivation has influenced many farmers to divert age old practice of farming.



Harvested carrot in the farmers' field Length of the carrot 16 cm/6.2 inch Follow up training programmes and method demonstrations

Horizontal spread within the social system: After the successful performance of the introduced carrot variety, more number of farmers were interested to take up carrot cultivation, so further dissemination through trainings and method demonstrations were carried out in different locations for horizontal spread. However, due to the limitations in the resources and higher investment for demonstrations only two villages were selected one Khonoma and the other Kigwema under Kohima District for frontline line demonstration in the current year which further enhances the income of the farmers. The extent of adaptation in the district was 40%.

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