

Chapter 7

Epilogue

The present chapter represents the precise form of the research works, explaining certain intricacies through subsequent interpretation of result. Notwithstanding a spectacular success achieved by Indian agriculture in the decades of 70s, the present day Indian agriculture is suffering from some ecological and as well as institutional constrains and these are most of the field crop varieties are genetically fatigued, the natural resource base supporting agricultural production function has been degraded alarmingly , the resilience of ecological functions has already been jeopardized and the brunt of climate change has refrained the present factor production from performing to a desired level. With this backdrop, the orchard crops have got some edge on field crops because they can behave in a more adaptive manner and maybe in an apparently non resilient ecosystem.

The entire study entitle **“The mango cultivation in Malda district of West Bengal: The functions of productivity and entrepreneurship”** has gone a certain distance to fathom and calibrate the entrepreneurial behaviour and functions of mango orchards in terms of set of exogenous and consequent variables.

Respondents were selected from Araidanga village of Ratua-I block of Malda district purposively. From the target population fifty mango growers were selected through simple random sampling.

Mango traders were selected from the marketing channel followed by the mango growers of the selected village.

The study revealed that the mango growers of the selected village are experienced in mango cultivation and have farming experience more than 10 years. The mango growers are big farmers with minimum land holding of 10 acres and maximum land holding of 20 acres and above.

The consequent variables are-

Yield of mango (unit area) (kg) (Y1), Yield marketed (kg) (Y2), Yield consumed (kg) (Y3), Cost of cultivation (Rs) (Y4), Net return (Rs) (Y5), GI Perception Index (Y6)

The exogenous variables are-

Age(x1), Education(x2), Family size(x3), Income from intercrops (per capita)(x4), Income from mango crop (per capita) (Rs) (x5), Size of mango orchard (Acre)(x6), Homestead area (katta)(x7), Distance Matrix(x8), Electricity consumption (Per capita)(x9), Fuel consumption (Per capita, per month)(x10), Frequency of visit to the market (in a week)(x11), Group interaction(x11), Problems related to mango cultivation (x13)

The following consequent variables have been found to make critical and dominant contribution.

- **Age (x1)**
- **Size of mango orchard (x6)**
- **Distance matrix(x8)**
- **Electricity consumption(x10)**
- **Frequency of visit to the market (x11)**
- **Group interaction(x12)**

So, these variables or characters certainly arid management and executionary attention for better yield, marketability and creating GI perception to a proper way.

The conglomeration of apparently different variables into homogeneous groups called Factor, The factor analysis has got tremendous strategic and operational implications; this will help allocation of resources based on factors, not on variables in isolation. The resource allocation can be proportionate in terms of variance explained by the respective factors. The total 13 exogenous Variables have been put up with Factor Analysis to identify the important factor in state of variables, which has been responsible for contributing the Variance in the process of conglomeration. There are 7 distinct components vis-a-vis factors are interacting to characterising the mango orchard. After renaming the factors are as follows-

- **Modernity index**
- **Mango Enterprise**
- **Family mobility**
- **Enterprise Interaction**
- **Enterprise Perception**

The Canonical Discriminant Function analysis (Step wise) envisages that amongst the dependent variables even there had been 2 set of variables. This suggest that moving together with selected consequent variables, keeping in view the discriminatory efficacy of some variables, a holistic approach needs to be undertaken for a sustainable yield and economic performance of the orchard.

Based on medians all the Y variables have been spited into high and low level of performed behaviour and having this in place Wilk's Lambda for this analysis have been found significant to infer that the efficacy of creating chases in high and low level of performances have been found substantive.

As agriculture plays a vital role in Indian economy, it is our duty to analyze the agricultural production and marketing system properly and try to resolve its problems. From the above discussion

it can be seen that the growing agricultural marketing system of India is facing some problems and the farmers are not getting the right prices of their produces.

Extension education and extension services can be a useful tool to solve these problems. All the stakeholders should be taken under extension services as all of them are equally important to make an efficient mango marketing system.

To usher a quality driven mango enterprise management along with its peripheral characters, we need to take a comprehensive action plan along with the critical factors of management have been traced in the present research. Better perception and proper policy with the most desired support from market back up can make mango enterprise in Malda a successful and sustainable entrepreneurial process; only a better action plan can harvest a better future tomorrow.

AREA OF INTERVENTION

- In Malda district, mango is available for only 2-3 months of the year and as mango is an alternate bearer crop, production fluctuates every year. So, the interspaces of the mango orchard can be used for cultivating crops like papaya, guava, banana, pineapple etc. To get additional income throughout the year.
- Due to lack of storage facility and market shades, mango growers and traders find it difficult to store ripe mango for a long. So, cool chain management for mango is essential to store ripe mango for 30-40 days.
- Good quality mango grafts should be supplied to the mango growers.
- Good agricultural practices (GAP), Branding and marketing, Use, Promotion and encouragement of bio pesticides.
- Assigning Geographical Indication (GI) to other varieties.

- Efficient method of irrigation technologies like drip irrigation should be introduced as it is easy to handle, cheap to buy and water use efficiency is very high.
- Farmers in the area are lack of market information, which could improve their knowledge to bargain with traders on prices by broadcasting the daily price of mango in different markets through television and local newspapers and establishing price notice board by the concern department.
- Post harvest handling of mango is very poor and a big amount of fruit is damaged at the time of transportation and handling. Awareness should be there to reduce post harvest losses and comparative advantage of proper post harvest handling can be demonstrated.
- Production and plant protection training to mango growers is must for technology transfer for meeting their practical needs of reducing pest and diseases and increasing productivity and quality of mango.
- While serving support and services, all the stakeholders of the value chain should be kept into account for the overall betterment of the mango value chain.

8.1 FUTURE RESEARCHSCOPE

The study overview the mango cultivation, production function and entrepreneurship of Malda district, West Bengal. There is scope for further studies focusing on the deeper insights of the production function and marketing actors in the supply chain. The following are the future scope of the study-

- The area of research is confined to a specific area, it can be extended further and sufficiently large number of mango growers may be studied to draw valid and general conclusions.
- In sampling technique for selection of district, block, done purposively. Multistage random sampling would have chosen for better result.

- Case studies of progressive farmers may be undertaken.
- Similar studies can be repeated after lapse of some time.
- Research maybe conducted to find out some critical phenomena like discontinuance and rejection of recommended technology, High Density Planting as well as technological gap and training needs of the mango grower.
- Knowledge practice gap of mango growers can be studied.
- Useful in determining the policy formulation for better adoption of new technology.
- Studies can be carried focusing in the export markets.
- The inclusion of path analysis would has contributed to explain the extent of direct, in direct and residual effect of independent variable over dependent variables.
- Lastly, the study is confined to only one fruit. Since the district has high level of production of other fruits like litchi and is also famous for silk production, research can also be carried out in these sectors.