Diagnostic Study Report

……..Cluster, ……. District, Kerala

Programme implemented under:

Department of Agriculture Development & Farmers' Welfare for Formation & Strengthening of FPOs in Kerala (RKVY- 2019-20)

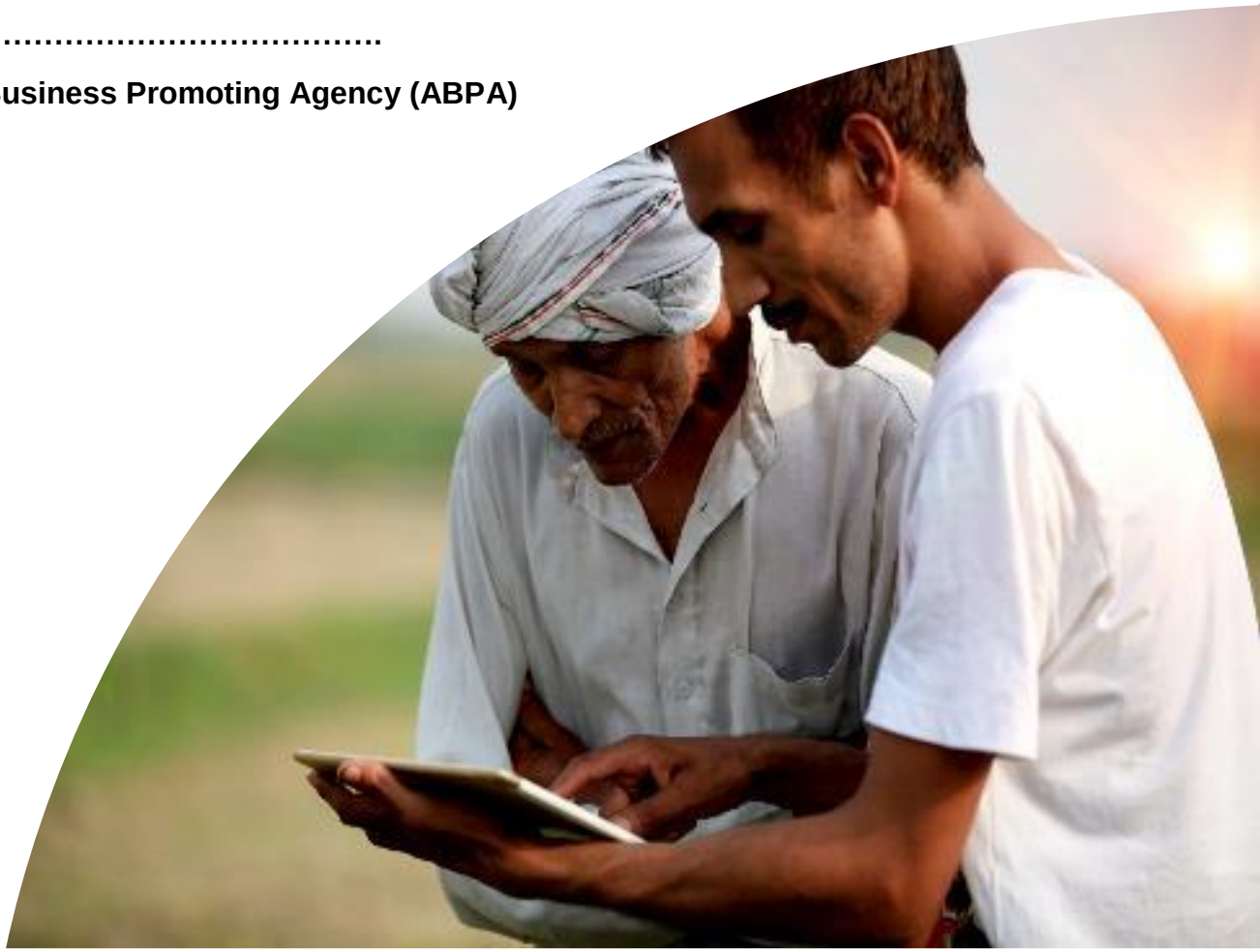
Implementing Agency:

Small Farmers' Agri-Business Consortium, Kerala

Prepared & Submitted by:

…….

Agri Business Promoting Agency (ABPA)



Contents

1. Introduction

1.1 Project Introduction

Farmer Producer Organizations (FPOs) are proposed as a way to integrate small and marginal farmers towards agricultural value chain. In order to leverage the collective bargaining power of the farmers by produce aggregation, to mitigate the risk in agriculture, improving the access of farmers, Agri business, improved access to investments, technology and inputs and markets.

It is required to work directly with the farmers to make them as collectives under the FPO. Aggregating producers into collectives is universally accepted. It is required for creating an enabling environment for smooth functioning of the producer organisations and help in overcoming impediments that the farmers face on day to day basis.

Govt. of Kerala intended to promote Farmer Producer Organisation registered under the Companies Act, 2013 as the most appropriate institutional form to mobilise farmers and build their capacity to collectively leverage their production and marketing strength.

There is great scope for FPOs in the future because it can only act as an effective vehicle for technology demonstration, seed production, and dissemination of GAP (Good Agricultural Practices) INM (Integrated Nutrient Management), IPM (Integrated Pest Management), Post-harvest management and value addition. The main objective of the FPO is to organise collection of Agri produce, processing, storage and marketing of their members' produce in high-value markets at an optimal price, thus reducing transaction costs and allow the Farmer Producer Companies to enter into partnership with private and public sector companies to supply aggregated farm produce in bulk on more favourable terms.

FPO will support its members in securing higher incomes by undertaking any/many/all of the activities listed in previous sections: by aggregating the demand for inputs, an FPO can buy in bulk, thus procuring at cheaper price compared to individual purchase. Besides, by transporting output in bulk, cost of transportation is reduced and also direct market connectivity is facilitated.

In fact, an FPO may aggregate the produce of all members and market in bulk, thus, fetching better price per unit of produce. Furthermore, an FPO can also provide market information as well as credit as well as common facilities to member producers to enable value addition and

to hold on their produce till the market prices become favourable. All such interventions are expected to result in increasing incomes of the member farmers and primary producers.

1.2 Project Background

Govt. of India have identified farmer producer organizations registered under the special provisions of the Companies Act, 2013 as the most appropriate institutional form to mobilize farmers and build their capacity to collectively leverage their production and marketing strengths. Collectivization of producers especially small and marginal farmers, into producer organizations have emerged as one of the most effective pathways to address the challenges of agriculture. It ensures improved access to investments, technology, inputs, credit, insurance value addition and markets.

The concept of collective strength is not new. Cooperatives are working traditionally for the farmers benefit and Agri development by supplying credit and other services. However, most of these institutions are weakened due to poor financial resources and lack of professional management. This resulted to defunct institutions. Hence, the context of collective efforts needs to re look in terms of extent of work, ownership and participation of farmers in the process.

In agriculture and Agri – allied sector most of the collectives have disproportionately focused on the production side, while providing very little attention to processing, value addition and market linkages. Hence it requires farmer-controlled institutions to engage in a more holistic and end-to-end approach in addressing the issues faced by the small farmer. Traditional cooperative societies were developed based on single activity; however, with changing scenario, holistic value chain approach is required to develop sustainable collective Institution. Proposed Farmer Producer Organizations (FPO), therefore, consider interventions starting from procurement/Initial services to production and processing to marketing in collective form.

Implementing Agencies are supporting this intervention by setting up Agri business Promoting Agency (ABPA), at the District / Cluster level to form and promote FPOs as per their requirements. ABPAs are entrusted to assist in the implementation of the program as per scheme guidelines and as may be suggested by the PMU-CA and SFAC-Kerala. The ABPAs are entrusted to carry out baseline survey, cluster finalization, value chain study, Cluster Diagnostic study, formation of groups and FPOs and assist in their periodical meetings, registration of FPOs, training and capacity-building, linking these bodies to input suppliers, technology providers, market players, etc.

To mainstream the process of institutional development of Farmer Producer Organizations, as per TM (1)11560/2020 Dated 30-06-2020 the Director, Department of Agriculture Development and Farmers' Welfare approved RKVY 2019-20- Operational Guidelines for FPOs in Kerala. Selected **.....**has prepared this Cluster Diagnostic

Report on the basis of these guidelines to promote a farmer Producer Organization (FPO) under the Scheme of RKVY-2019-20.

1.3 Major Deliverables

S.No	Components	Time Period
1	1. Cluster Identification based on Agro Ecological Unit/Zone , Feasibility Study and Analysis, Baseline Surveys and Assessment , Ground work including publicity, desk reviews, field visit, meeting with cluster farmers, SHGs, NGOs, Cooperatives, VFPCK, Horticrop and PSUs in prospective areas, 2.Conducting diagnostics studies 3.Identification of FPOs	3 months
2.	Preparation of Farmer Community Participation based Value Chain Analysis and customized Business Plan Preparation, Mobilisation of Farmers and Organizing FIG's	2-3 months
3.	Preparation of Memorandum and Articles of Association	2-3months
4.	Training and Capacity building – Business planning & management exposure visits, training on book – keeping, accounting etc. Training to Board of Directors	3-6 months
5	Registration of FPOs as FPC Licensing – GST, Input license for sales of bio fertilizers, fertilizers, seeds and pesticides, FSSAI, Pollution Control Board: Consent to establish & consent to operate, Panchayat/LSGD/KSIDC/Udyog aadhar, IE Code and other mandatory registrations/ Licenses	3-6 months
6	Development of MIS software & process tracking, Apps, Call Centre and database of FPOs	3-6 months
	Interim review and monitoring.	6 months
7	Incubation and Marketing support services for implementation of business plan 1.Input facilitation	6-9 months
	2. Establishment of custom hiring centre, linkage with Agro Service Centers, Kerala State Agro Mechanization mission, Preparation of Agro Machinery Bank, Linkage with SMAM etc.	6-9 months
	3. Common Facility Centre/ Pack house for procurement, primary, secondary, minimal processing, sorting, grading, packaging, storage, ripening chambers etc.	6-9 months
	4.Linking with central and state Government schemes like Janakeeyasoothranam, SAMPADA, , Special Economic Zones, PMEGP, NHB, SFRUTI and other MoMSME schemes , etc.	6-12 months

	5.Equity grant, Credit guarantee fund, Venture Capital Assistance of Central SFAC and other sources	6-12 months
	Interim review and monitoring. Management and financial audit	12 months
8	Incubation, Marketing support and forward linkages Linking with e- NAM, e-commerce portals, Online marketing channels, etc. Linkage with financial institutions	6-15 months
9	Establishment of Brands, designing Logos and packaging, Branding, Registration etc.	6-15 months
10.	Conduct of Buyer seller meets	6-18 months
11	Assessment and Audit , Mid – term evaluation and grading of FPCs	18 months/ As required by SFAC Kerala
12	Exploring diversification, Value addition and expansion Exploring export potential, licenses and clearances	6-24 months
13	Buyer seller meet Management and financial audit	6-24 months
14	Exploring possibility of Organic and GAP certification and marketing under India/ Kerala Organic or Safe- to-Eat Brands	6-30 months
15	Tie-ups/ linkages with retail change at domestic and international level or developing own retail chains / outlets and developing technology for Block chain in agriculture and setting up of modern supply chain system	6-30 months
16	Linkage with NABKISAN, NABFIN etc.	6-36 months
17	Final evaluation and grading of FPOs/FPC's Management and financial audit	30-36 months/ As required by SFAC Kerala
18	Sustainability and Final phase out	36 months

Over a period of 36 months from the start of inception

1.3 Objective of Diagnostic Study

The major objective of Diagnostic Study is to assess the preliminary situation of the farmers and level of agriculture in the area. The study will also help in identifying the potential interventions required and understand the specific project implementation context.

1.3.1 Scope of the Diagnostic Study

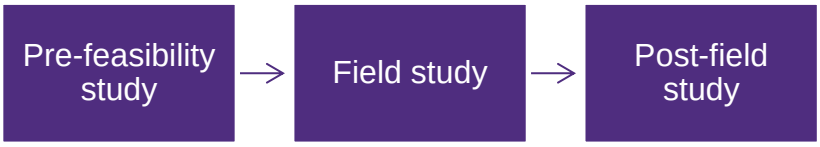
The scope of Diagnostic Study envisages to map the existing agriculture and agri-business scenario of the cluster to assess out the underlying strength, weaknesses and opportunities of the major crops and to suggest way forward for enhancing the competitiveness of the concerned farmers to ensure their sustainable growth in terms of crop productivity, reduced

cost of production, farm mechanization, technological upgradation, post-harvest quality up-gradation, processing efficiency, brand building, etc.

The study will target at least …… major selected villages in the cluster, spread across important locations in ……. district of …… i.e., ……., ……, ……..., ……,……The purpose is to understand the crop profile including the no. of traders and sales mechanism, area and business network with other markets and formulate subsequent strategy for new FPC formation.

1.4 Methodology of diagnostic study

The Cluster diagnostic study was conducted in three phases as mentioned below:



1.4.1 Pre-feasibility Study

i. Preliminary discussion with the client

Preliminary discussion was done with the officials of Department of Agriculture both at the Head quarter (Trivandrum) as well as at the district and Cluster level with respective Project Directors- ATMA, ADAs, PAOs and AOs in order to understand the existing scenario of farmers and crop production with context to the project area. The clusters in the district and the villages in the clusters were finalized after brain storming with the respective officials and extensive field visits. The whole study plan was briefed and shared with each other to facilitate smooth coordination and timely execution of field plan.

ii. Secondary Data Research

Secondary data regarding the 3-year district-wise crop production of Kerala state was collected from Department of Horticulture- H.Q., located in …….. Similarly, data with respect to the clusters of respective districts was collected from the offices of PD- ATMA/ PAOs. HOs supported in retrieving the village-wise crop production data of concerned clusters. The websites of Kerala. Govt., NHB, CDB, etc. were helpful in retrieving national/international statistical data with respect to Agriculture scenario in the country.

The secondary research helped to understand the on-going project intervention (Agriculture related schemes) very well and further aided in designing the data collection tools (Questionnaire and Checklist) properly for In-depth Interview and Focus Group Discussion.

iii. Identification of Cluster

Team …...identified the cluster (Mandal) considering the following factors:

- The cluster needs to cover major commodities from the area catering to both the seasons/ Annual/ Perennial
- All the identified clusters need to be within a distance of 50 to 60 KM from the middle/central cluster.
- The cluster needs to have more than 3,000 to 4,000 cultivators.
- The cluster needs to be identified based on the insights given by the SFAC-Kerala & district officials.

- Avoided clusters having existing functional and active FPOs:

  - FPOs registered under MACS Act and Companies Act.
  - Mobilized Share Capital more than INR 1, 00,000.
  - FPOs undertaking some business activity like input business, custom hiring centre, primary or secondary processing, commodity trading, etc. and having reasonable turnover.

iv. Data Tool Designing

i. Data tool designing was done with help of secondary data and along with the lines of study objectives. Data collection tools consisted of **In-depth Interview Questionnaire** and **Checklist of Focused Group Discussion**. Questionnaires were prepared to collect data from the individual farmers (as per the drafted sample size) through one-to-one in-depth interviews especially for quantitative analysis. Whereas, FGD Checklist were designed for extensive discussion with group of farmers to collect qualitative data.

ii. In order to save time in data entry and facilitate daily monitoring of the data collection on field level, the in-depth survey questionnaire was designed in the Google forms/…….

v. Sample Size

To conduct the diagnostic study at cluster level, the sample size for in-depth interviews was taken as at least 60 farmers in a cluster with the distribution of number of respondents per village was based upon the farmers' population of village.

vi. Sampling Methodology

i. **Clustered random sampling methodology** was followed to initially finalize the villages for the diagnostic study in the cluster. The villages were selected based upon the population size of the farmers as well as their accessibility to the Social mobilizers, representatives of Team ……, within the radius of …….. kms from the central village.

ii. In the selected villages, **Simple random sampling** was followed for the in-depth interviews wherein every farmer in the village being studied had an equal chance of being selected.

vii. Field plan preparation

The field plan mainly focussed upon the allocation of number of in-depth interviews and FGDs to carried out by the members of Team GT per day in order to complete the data collection within the estimated time.

1.4.2 Field Study

I. Pilot Testing of Data Collection Tools

A pilot test of the designed data collection tools helps to check the appropriateness of questions to the target population. It also tests the correctness of the instructions to be measured by whether all the respondents in the pilot sample are able to follow the directions as indicated. It also provides better information on whether the type of survey is effective in fulfilling the purpose of the study.

Therefore, pilot study FPO catchment area in ……..Village ……district. Based upon the feedbacks, the FGD checklist was modified and finalized.

II. Data Collection:

In order to understand the cluster, its pre-harvest and post-harvest agriculture scenario and existing barriers to growth, in-depth interviews and meetings were conducted with farmers from the region. The information was collected for the following:

- Socio-economic profile of farmers
- Crop Production System
- Major Crops and their Pre-harvest practices
- Post-harvest practices
- Current Processing Status
- Agri- markets
- Warehouses/Cold storages
- Others

1.4.3 Post Field Study

I. **Data Entry**: Data collection through Google form based survey proved to be time-effective as it directly stores the feedback received in excel format, so, one can directly analyse it in detail. Yet in some villages, with poor internet connectivity, off-line surveys were conducted which were later on updated online.

The qualitative data collected through FGDs were incorporated in the report directly as per the appropriate topics under discussion.

II. **Data analysis**: Data analysis consists of inspecting, cleansing, transforming, and modelling data with the goal of discovering useful information, informing conclusions, and supporting decision-making. Data initially obtained, was processed or organised for analysis. For instance, it involved placing data into rows and columns in a tabular

format (i.e., structured data) for further analysis, within the spreadsheet. Data cleaning was done to remove incomplete, duplicates and other errors. Descriptive statistics, such as the average or median was generated to help understand the data. Data visualization was also used to examine the data in graphical format, to obtain additional insight regarding the messages within the data.

III. **Diagnostic report preparation**

The Cluster Diagnostic Report contains the following Chapters-

I. Introduction to Project
II. Horticulture Scenario
III. Profile of producer
IV. Production Management
V. Post-Harvest Management
VI. Conclusion and way forward
VII. Report presentation to the client & finalization of reports

The key findings of the Diagnostic report would be presented in front of the respective…….and after incorporating their feedbacks, if any, the report is being submitted finally for record and further action.

2. Agriculture Scenario

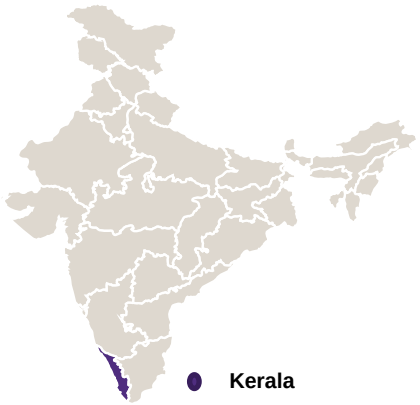
2.1 Global Scenario

2.2 Indian Scenario

Write about the Area, Production and Productivity of important agriculture, horticulture, plantations, and other crops (Last three-year data, preferred-Source: Secondary, Ministry of Agriculture, NHB, Statistics department,)

2.3 State Scenario

Kerala is located along the coastline to the extreme south-west of the Indian peninsula, flanked by the Arabian Sea on the west and the mountains of the Western Ghats on the east. The state has a 580 km long coastline. Malayalam is the most commonly spoken language. Hindi, English and Tamil are the other languages used. Kochi, Kozhikode, Kollam, Thrissur, Alappuzha, Palakkad, Thalassery, Ponnani and Manjeri are some of the key cities in the state. There are 44 rivers flowing through Kerala, the major ones being Periyar (244 km), Bharathapuzha (209 km) and Pamba (176 km). Out of these 44 rivers 41 are west flowing and 3 are east flowing. At current prices, Kerala's GSDP was about Rs 8.76 trillion (US$ 125.27 billion) in 2019-20. The state's GSDP recorded a CAGR of 11.59 per cent between 2011-12 and 2019-20.[1]

Kerala key highlights		
State capital	Thiruvananthapuram	
Geographical area	38,863 Sq. Km	
Population (Census 2011)	33.41Million	
Gross state domestic product (GSDP)	Rs 8.76 trillion (US$ 125.27 billion) in 2019-20 at current price	
Per capita income	Rs 199,101 (US$ 3,089) during 2017-18 as compared to Rs 108,666 (US$ 2,318) during 2011-12 Per capita GSDP increased at a CAGR of 8.73 per cent between 2011-12 and. 2017-18	
FDI inflows	USD 2.24 Billion- FY00-FY19	
Total road length (kms)	33.594 km	
Rail length (route kms)	1,045 Km	
Ports	Major port: 1 Intermediate ports:3 Minor Ports:15	
Airports	Four	

In terms of cropping pattern in Kerala, gross cropped area in Kerala has declined from 29,33,000 hectares in 1970-71 to 25,79,000 hectares in 2017-18, registering a decline of about 12 per cent. As of 2017-18, the gross cropped area in Kerala stands at 25,79,000 hectares

[1] *Kerala at a glance, Economic Review of Kerala,2014-15, Government of Kerala website, Census 2011, Central Statistics Office*

while the net sown area is 20,40,000 hectares. However, the gross irrigated area stands at only 21 per cent of the gross cropped area and has increased at a very slow pace from 3,81,000 hectares (13 per cent of GCA) in 1980-81 to 5,40,000 hectares (21 per cent of GCA) in 2017-18. The slow growth in irrigated area has a major bearing on production and productivity in agriculture sector in the state.

The total number of operational holdings in Kerala is 68,31,000 of which 96% ie., 65,80,000 operational holdings fall in the marginal landholding category. On the other hand, in terms of area operated, marginal landholdings constitute only 59%, while landholdings in the size range of 1-1.99 ha constitute 19%. Operational holdings under the size class of 2.00 to 10 ha and above, constitute only 1 per cent of the total landholdings whereas in terms of area operated, they constitute 15 per cent of the total area under operational holdings in the state.

The total cropped area of the State has been declining consistently, from 30 lakh hectare in 2000 to 25.79 lakh hectare in 2017-18. Net sown area has recorded a slight decline of 8.64 percent, and the area sown more than once has declined by 30.29 percent. Current fallows have decreased 7.5 percent whereas the “fallows other than current fallows” as well as “cultivable waste land” have recorded an increase of 63.38 percent and 71 percent respectively. Thus, the land that is fit for cultivation but is not being cultivated is on the rise signalling the tendency of people to keep land fallow for various reasons.

Share of agriculture and allied sectors in GVA and GSVA: The share of agriculture and allied sectors in the total Gross State Value Added has been declining consistently, in consonance with the all-India trends. The share of agriculture and allied sectors in total GVA (India) and GSVA (Kerala) over the period from 2012-13 to 2017-18 is presented in the table.[2]

In Kerala, over the years, service sector has grown in importance, while agriculture sector and its role in value added and generation of employment has declined consistently.

Year	Share of agriculture and allied sectors in total GVA (India)	Share of agriculture and allied sectors in total GSVA (Kerala)
2012-13	17.8	13.77
2013-14	17.7	12.37
2014-15	16.5	11.92
2015-16	15.4	10.74
2016-17	15.3	10.26

There has been a steady decline in the gross area under food crops in Kerala between 1970-71 and 2017-18. Over time, the state has shifted to cultivation of commercial crops/plantation

[2] *State Level Bankers Committee, Kerala, Retrieved on 28th February 2021,* *http://slbckerala.com/*

crops and spices on a larger scale. While the gross area under rice cultivation has declined to almost one-fifth of the area cultivated between 1970-71 and 2017-18, the area cultivated under rubber has trebled and that under coconut has increased, although not at a considerable pace. The area under pulses has registered the highest rate of decline and at present, only 2,000 hectares are under pulses cultivation. The area under rice and pulses which in 1970-71 constituted 31 per cent of the Gross Cropped Area, has come down to 7.4 per cent in 2017-18. Since pulses are a rich source of protein and are water-efficient, promoting cultivation of pulses would augur well for nutrition security and food security of the state. Of late, experiments such as labour banks have taken shape, in an attempt to pool in workers to cultivate fallow lands and leased areas under cultivation, which may have been responsible for the slight increase in the area under cultivation under rice between 2016-17 and 2017-18. The experiment has been active in the districts of Palakkad and Thrissur, which are among the major rice-growing regions in the state. Whereas on the other hand, gross cropped area under rubber cultivation has increased from 6 per cent of the GCA in 1970-71 to 21 per cent in 2017-18.[3]

#	Crop/year	1970-71	1990-91	2012-13	2016-17	2017-18
1	Paddy	1298	1087	509	436	521
2	All pulses	13	17	3	2	2
3	Rubber	88	308	800	540	541
4	Coconut	3981	4232	5799	5379	5230
5	Pepper	25	47	46	34	38
6	Cardamom	1	3	10	17	18
7	Ginger	20	46	22	20	19

**Area in Hectare*

The production of paddy has decreased in consonance with the decrease in area cultivated. The production of pulses has remained stagnant over the immediate preceding years. In the case of rubber, production and productivity had peaked and the price situation in international markets had turned favourable during 2000s. However, Kerala's share in national rubber production has come down from 92% to a decade ago to 69.66% owing to increase in cultivation of rubber in non-traditional regions such as North-East.

Rainfall: Agriculture in Kerala is mostly dependent on rainfall. Following the great floods of 2018, rains spread havoc in 2019 in the northern districts of Kerala during the South-West Monsoon. The pre-monsoon rainfall received during the period from March- May 2019 was categorised as "deficient" by IMD. The rainfall received during this period was 55 per cent less than the normal rainfall of 379.7 mm as against 169.6 mm. Wayanad was the only district reported to have received normal rainfall, although the rainfall was 2 per cent less than the normal levels.

[3] *State Level Bankers Committee, Kerala, Retrieved on 28th February 2021,* http://slbckerala.com/

Livestock Sector: Livestock sector is an important sub-sector of the agricultural sector of the economy. It provides self-employment opportunity to unemployed in rural areas and also acts as an additional source of income to farmers engaged in cultivation of crops. The progress in livestock sector is bound to lead to increased incomes and a better standard of living for rural families. At the all-India level, the share of livestock sector in total GVA of agriculture sector was to the extent of 26.2 per cent in 2016-17 at constant prices, while in Kerala, the share of livestock in GSVA from agriculture sector is close to 27 per cent, slightly higher than the all-India level.

As per the 19th Livestock census (2012), the livestock population in the State is 27.35 lakh. It is 23 percent less as compared to previous census. The primary reason for this is the decline in the population of cattle and goats. As per the 20th livestock census, the poultry population of Kerala is 29.8 million, reflecting a 23 per cent increase over the poultry population of 24.3 lakh as per the 19th livestock census. Milk, meat and egg are the major livestock products in Kerala.

Among the milk producing States in the country, Kerala ranks 14th, with a share of 1.5 percent of the production. The production of milk increased from 25.20 lakh MT in 2016-17 to 25.76 lakh MT in 2017-18. The per-capita availability of milk in Kerala declined from 202 gm per day in 2016-17 to 192 gm per day in 2017-18, which is just above half of the national average per capita availability of milk of 375 gm per day. Kerala Co-operative Milk Marketing Federation (MILMA) is one of the most important agencies for milk procurement in the state.[4] During 2017-18, except in Ernakulum, Palakkad and Wayanad, sales of milk exceeded procurement. The shortfall between milk procurement and sales was met by arranging milk from state milk federations of Karnataka, Tamil Nadu and purchase of skimmed milk powder. In order to facilitate increased production of milk in the state, several programmes are being undertaken in the state such as: Special Livestock Breeding Programme, Involvement of Kerala Livestock Development Board in production and distribution of frozen semen, Promotion of dairy zones under the scheme, 'Commercial Dairy Milk and Milk Shed Development Programme, Focus on Fodder and feed production and Emergency veterinary care services, animal health care services and production of vaccines for animals.

The total production of egg in the country in 2017-18 stood at 9,520 crores and has been steadily on the rise since 2000-01. Per-capita availability of egg has also been on the rise steadily with the figure in 2017-18 at 74 per annum. The largest producer of eggs is Andhra Pradesh (18.7 per cent of total production) with a per capita availability of 341 eggs per annum, which is significantly higher than the national average. Kerala ranks 10th in India in terms of egg production. The total egg production in the State was 2.23 billion eggs in the year 2012-13 and continued to rise and reached 2.50 billion in the year 2014-15. Since, then it declined to 2.44 billion in 2015-16 and further to 2.34 billion in 2016-17. The per-capita availability of egg stands at 64 eggs per annum in Kerala (2017-18).

[4] *State Level Bankers Committee, Kerala, Retrieved on 28th February 2021,* http://slbckerala.com/

Kerala is the 8th largest meat producing state in the country, accounting for 6.1 per cent of the meat produced in India. Out of the total meat produced, 38.8 per cent is poultry meat, 33.95 per cent is sourced from cattle and 20.99 per cent from buffalo. Goat and pig contribute 4.78 per cent and 1.47 per cent of the meat production in the state. (Source: Economic Review 2018)

Kerala occupies a very important place in the fisheries map of the country. India ranks second in terms of inland fish production and sixth in marine captured fish (Source: Economic Review 2018). While the total fish production in India in 2016-17 (provisional) was 114.09 lakh tonnes, in Kerala, the production stood at 6.76 lakh tonnes. The total fish production in Kerala during 2016-17 was 6.67 lakh tonnes, of which marine accounted for 4.88 lakh tonnes and inland fish production was 1.88 lakh tonnes. Fisheries and aquaculture contribute around 8.5 percent of the GSVA from the primary sector which is of much significance to the state economy.[5]

Overall, Kerala is one of the leading pepper and rubber producers in the country. Kerala is the leader in rubber production in the country. State accounted for about 78 per cent share in the total natural rubber production in 2017-18. Natural rubber production in Kerala stood at 551 thousand MT during 2017-18.

Kerala can be termed as the land of spices, considering the large variety of spices grown in the state. Kerala is the largest producer of pepper in India and accounts for a lion's share in India's production. Apart from pepper, other spices produced in the state include ginger, cardamom, nutmeg, tamarind, etc. During 2019-20 (till Sept 19), spices export from the state stood at US$ 208.89 million.

[5] *State Level Bankers Committee, Kerala, Retrieved on 28th February 2021*, http://slbckerala.com

2.4 District Scenario

Write about the Area, Production and Productivity of important agriculture, horticulture, plantations, and other crops (Last three-year data, preferred-Source: Secondary, Ministry of Agriculture, NHB, Statistics department, etc.)

2.5 District Scenario

Give a brief profile about the district also mention about the Area, Production and Productivity of important agriculture, horticulture, plantations, and other crops (Last three-year data, preferred-Source: Secondary, Ministry of Agriculture, NHB, Statistics department, etc.).

2.4 Cluster Scenario

Give a brief profile about the cluster, distance from the district headquarters, major National Highways, Major State Highways, distance to nearest sea port, distance to nearest airport, total number of villages and Panchayath, also mention about the major crops grown in the cluster- Area, Production and Productivity of important agriculture, horticulture, plantations, and other crops (Last three-year data, preferred-Source: Secondary, Agriculture office/Dept. NHB, Statistics department, etc.).

3. Profile of Producer

3.1 Basic Profile of Farmers

The quantitative analysis of baseline survey of 60 respondents from ……. cluster shows that ……..% of the respondent farmers belonged to the category of small (…..%) and marginal (……%) farmers and remaining …….% respondent farmers were from the semi medium category. In terms of caste profile, ……% of the respondent farmers belonged to the general category and remaining ……..% were from OBC caste.
Maximum no. of the respondents were males, i.e., …….%.

3.2 Source of livelihood

-Primary Source

(Write analysis based on data)

-Secondary Source

(Write analysis based on data)

3.3 Annual Net income

-Primary Source

(Write analysis based on data)

-Secondary Source

(Write analysis based on data)

3.4 Farmer Asset Details

The survey also revealed the access of farmers to the basic livelihood amenities like type of house, vehicle, electricity along with the modern day necessities such as television, vehicle and Mobile. (Write analysis based on data, add bar charts, etc.).

3.6 Farm Equipment Details

(Write analysis based on data, etc.).

3.7 Details on Subsidy for Buying Farm Equipment

(Write analysis based on data, etc.).

3.8 Details on Scheme under Which Farmers has Availed Subsidy for Burying Farm Equipment

(Write analysis based on data, etc.).

3.9 Livestock Details

(Write analysis based on data, etc.).

3.10 Irrigation Details

(Write analysis based on data, etc.).

3.12 Details on Sources of Input Purchase

(Write analysis based on data, etc.).

3.13 Crop Wise Detail- Season/Area/Production/Productivity, etc.

(Write analysis based on data, etc.).

3.14 Details on Techniques used for Advanced Crop Production

(Write analysis based on data, etc.).

3.15 Details on Financial Services

(Write analysis based on data, etc.).

3.16 Details on Marketing/Selling of Agricultural Produce, Means of Transportation, Storage, Available Infrastructure

(Write analysis based on data, etc.).

3.16 Details on assistance under any Govt. of Kerala, Govt. of India Schemes

(Write analysis based on data, etc.).

3.16 Details on Field Level Awareness on FPC/FIG

(Write analysis based on data, etc.).

3.16 Details on Field Level Awareness on FPC/FIG/Willingness for registered FPC Share, etc.

(Write analysis based on data, etc.).

3.16 Any Other Details

(Write analysis based on data, etc.).

4. Key Findings and Conclusion

4.1 Key Findings or Observations

The key findings of the diagnostic study conducted in …… cluster of …….. district have been summarized in the table given below:

Sl No	Cluster scenario (with respect to)	Key findings/ Observations during the Diagnostic Study
1	For example- Farmer profile ** Refer chapter no 3- Specific sections and draft the same	-96% of the respondent farmers belonged to the category of small and marginal farmers -56% of the respondent farmers belonged to the general category -98% of the respondents were male. **Above figures is just an example
2		
3		
4		
5		
6		
7		
8		
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10		
11		
12		
13		
14		
15		

4.2 Conclusion

Based upon the diagnostic study conducted write the conclusion in about 1-2 paragraph.

4.3 Indicative Intervention

The Farmer Producer Company (FPC) promoted and formed in the cluster will look forward to address the issues related to production, harvesting, storage and value addition/export related facilities. The main focus of FPC would be to reduce cost of production, improve the productivity and access to better market price. Following are the proposed interventions through FPC promotion-

1. Agri. Input Service Centre

Findings of this report will be crucial in establishment of agri. input service centre. The Input Shop will not only sell the agri. inputs but will also act as a go-to guide for farmers in terms of good practices like

- Soil testing
- Selection of seed and variety
- Fertilizer doses
- Stages of irrigation
- Pesticide and insecticide application
- Inter-cropping
- and many more

2. Custom Hiring Centre
3. Produce Aggregation and Trading
4. Produce Aggregation and Trading
5. Working Capital related
6. Seed Production/ Nursery
7. Capacity building of BoDs/ leaders
8. Market Linkages

** May change above proposed interventions with regard to FPCs actual potential

12. Annexures

Annexure 1: Farmer stakeholders consulted

S.No	District	Village	Name of Farmer	Mobile no of Farmer
1				
2				
3				
4				
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Field Visit Photographs

Annexure 2: Diagnostic Study Format

Contact us

To know more, please visit **www.grantthornton.in** or contact any of our offices as mentioned below:

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