**Research Report: IX/ADRT/113**

# CONTRACT FARMING IN KARNATAKA: A BOON OR A BANE?

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**March 2006**

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# FOREWORD

The structure of Indian agriculture underwent rapid changes during the nineties both due to the pressure of commercialisation and increased dependence on trade. This was fuelled by many overt and covert changes in the sector, but diversification of crops along with the advent of WTO and liberalisation policies were the main players in the structural change. One of the important bottleneck, highlighted by many analysts of Indian agriculture refers to the small size of holdings and the inability of the Indian farmers to compete with the large scale farming of the West. This was manifested in the proverbial "level playing field" often referred to in recent debates. One of the ways to deal with this small scale farm operations is to bring small and marginal holders (not holdings) together in a production system so as to deal with a particular product. This would address three important issues simultaneously. First, the access to technology by the small and marginal farmers has been quite restricted and it is was only available to those who could garner information at a fast speed. The recent NSSO report ($59^{th}$ Round) highlights this fact. Second, small and marginal farmers faced discriminated pricing both in the factor and product markets and that has resulted in reducing their net income flow. Lastly, the capability of small and marginal farmers has always been far better than their large holding peers in terms of productivity and quality of land. But all these years that could not be taken advantage of due to the scale and limited access to technology. These aspects need immediate attention and as society responds quietly to the challenges in its own manner, contract farming has emerged in the country like the Pepsi Model initiated in Punjab. The experience has given rise to a large number of controversies including over-exploitation of land, tendency towards monoculture, market dependence, asymmetry about sharing gains between contractors and contractees and the exploitation by contractors. There are a good number of indepth studies available in the literature on contract farming analysing these issues but not much has been done in the context of Karnataka, where it is emerging steadily but firmly as an alternative. It assumes additional significance as in Karnataka, contract farming is emerging in the resource constrained region with low capital formation as its hallmark. The study by Dr. S.Erappa is an attempt to fill this void. The study emerged out of his personal keen interest and persuasion. Therefore, the study indicates his concerted efforts and analytical prowess. He has analysed five different contracting agencies and contract farmers connected with these agencies in Southern Karnataka. The basic hypothesis attempted in the study is to look into the question of "boon or bane". The answer provided is not in terms of monosyllables but provides a good background analysis, in addition to the coverage in the field. He has been successful in bringing out a few basic problems in contract farming in Southern Karnataka.

I am sure that this study would be useful to those who are looking at the regional specification of contract farming models and responses of various farm groups in the process. The study will also be useful to academics working in this field to fish out new questions in the process.

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# PREFACE

This report is the outcome of a research project, “Contract farming in Karnataka: A Boon or A Bane?”, sponsored and funded by the Agro-Economic Research Division of the Department of Agriculture and Cooperation of the Directorate of Economics and Statistics of Ministry of Agriculture, Government of India. The study was executed by the Agricultural Development and Rural Transformation (ADRT) Unit of the Institute for Social and Economic Change (ISEC), Bangalore. We are grateful to the Ministry for the faith reposed in ISEC, particularly in the ADRT Centre, and entrusting this project for execution by us.

We are grateful to Prof. Gopal Kadekodi, Director, ISEC for his constant encouragement in our research pursuits and the enabling atmosphere he sought to provide for the successful execution of the project. We also thank to Prof RS Deshpande, Head, ADRT Unit not only for providing the necessary infrastructure for the project but also for being a constant source of inspiration for our day-to-day work. Our thanks are also due to the Director, Joint Director, Deputy Director and other functionaries of the Directorate of Agriculture, Government of Karnataka, Bangalore with whom we have had very fruitful and insightful discussions on the myriad aspects of Contract farming in Karnataka. Again, it was through departmental efforts that the team was able to be in touch with organisations engaged in contract farming in Karnataka, particularly promoting Gherkin Crop in the State, and collect valuable data for the study. We place on record our sincere appreciation and gratitude for their willing cooperation.

Further, we owe our special thanks to the Chairmen, CEOs, Agricultural, Commercial and Accounts Managers, Agricultural Production Managers, Agricultural Extension Executives, Agricultural Extension Assistants, Procurement Executives, Buyers and Buying Assistants working in the field of the selected companies, viz., Global Green Company Ltd., Unicorn Agri-Tech Ltd., Intergarden (India) Pvt. Ltd., Reitzel India Pvt. Ltd., and Vishal Natural Food Products etc. But for their cooperation and support through discussions etc., successful completion of this study would not have been possible.

We thank Mr. R Venkatesh, Research Assistant, ADRT Centre, ISEC, for conducting fieldwork for the study and assisting in entering data. Mr.Venugopal Reddy spared his valuable time to input the tables in the report. I wholeheartedly thank him for his help. Last but not least, I thank the selected farmers (both contract and non-contract) in the study area for the valuable information they willingly provided for the study.

**S. Erappa**

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# CHAPTER 1

# INTRODUCTION

With the emergence of free market economy in the wake of liberalisation, globalisation, privatisation and the fast expansion of agri-business, small-scale farmers may find it difficult to cope up with the resultant volatility in the economy. They tend to be marginalised and migration from rural to urban areas is increasing at an alarming rate all over the country. Consolidation of holdings is, therefore, increasingly becoming the need of the day.

The various state intervention strategies as well efforts by non-governmental organisations to arrest migration of the rural masses, which include promotion of income generation activities, have not succeeded in reversing this trend. One of the strong reasons could be the lack of well established forward and backward linkages (reliable and co-effective) such as extension advice, mechanisation services, supply of seeds, fertilisers and credit, as also guaranteed and profitable markets for their produce (FAO: 2001). Therefore, the need for contract farming, which would hopefully promote the linkages to the small-scale farming community to grow crops on commercial terms.

Contract farming can be defined as an agreement between farmers and processing and/or marketing firms for the production and supply of agricultural products under a forward agreement, generally at predetermined prices. The agreements also allow the purchaser to provide a degree of production support through inputs and technical guidance for the crop cultivation. From the farmer's side, there is a commitment to produce the specified agricultural products within the quality and quantity standards prescribed by the purchaser, and the firm supports, in turn, the farmer's production, and also purchases the produce.

The contractual agreement encompasses three areas viz., market (grower and buyer agree for future sale and purchase), resource (buyer agrees to supply inputs and technical advice) and management specifications (grower agrees to follow the recommended practices for the crop cultivation).

Contract farming has long-term benefits for both grower and purchaser, provided that their long-term association is mutually complementary. A sizable part of the farming community falls under the small and marginal farmers' category in India. Contract farming, therefore, becomes increasingly important as it allows their agricultural produce to be purchased by multinationals, small companies, government agencies, farmers' cooperatives and individual entrepreneurs.

**History of Contract Farming in Karnataka: A Brief Note**

The practice of contract farming was prevalent in the sugar industry where farmers agreed to grow sugarcane at a pre-notified price for decades. Of late, MNCs have entered into the agricultural sector and introduced a number of horticultural crops, and their products have a high demand in international markets. Contract farming, as it existed then, was different from the design and functioning of contract farming methods obtaining today. In other words, the state notifies the price and extends other facilities i.e., supply of seeds, fertilisers, package of practices, and buy-back from the farmer's field, grade-wise price fixation, and, more importantly stands guarantee for the contract agreement between the farmer and the concerned MNC. The liberalisation of seed policy has enabled the import of new varieties of crops, both hybrids and high-yielding, by corporate bodies through joint ventures.

Karnataka's agrarian structure is very conducive in promoting contract farming in the country. The distribution of number and area of operational holdings across gender and major size classes during 1995-96 and 2000-01 is given in Table 1. The aggregate pattern of percentage variation in the number of operational holdings and the area operated by size class, reveals 13.8 per cent and 1.6 per cent respectively in the 1995-96 and 2000-01 agricultural census. In other words, the number of operational holdings was increasing, while the area operated was declining during the successive agricultural census in the state. It is interesting to note that across all size classes the percentage variation in the medium and large holding categories indicates negative trends. Further, the percentage variation in the operational holdings (male and female) increased by 14 per cent and 27 per cent respectively between 1995-96 and 2000-01. Whereas, percentage variation of female area operated has increased by 14 per cent, while the corresponding figure for male operational holdings shows negative (-0.2 per cent) percentage variation in the state. It is noteworthy that both the number of operational

holdings and area under operation among marginal and small farmers categories have shown increasing trend during the reference period.

Karnataka will shortly emerge as one of the food park centres in the food basket of India. Within a short span of time, Karnataka may see billionaires not only in the IT sector but also in agriculture in general, and, in particular, in the food processing segment of the above sector. The Karnataka agro-food processing industry is all set to put the State in the world map: with six food parks ready for take off as public-private

**Table 1.1: Distribution of Number and Area of Operational Holdings according to sex and major size Classes**

| Size Class | Number of holdings (in 000") | | | | | | | Area operated (in ooo" hectares) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2000-01 | | | 1995-96 | | | P V | 2000-01 | | | 1995-96 | | | P V |
| | M | F | T* | M | F | T* | | M | F | T* | M | F | T* | |
| Marginal (1ha) | 2630 (44) | 616 (54) | 3252 (46) | 2154 (40) | 452 (50) | 2610 (42) | 24.6 | 1217 (11) | 273 (17) | 1492 (12) | 1039 (10) | 208 (15) | 1248 (10) | 19.6 |
| Small (1-2 ha) | 1623 (27) | 283 (25) | 1909 (27) | 1473 (28) | 232 (26) | 1707 (27) | 11.8 | 2333 (22) | 404 (25) | 2742 (22) | 2143 (20) | 335 (24) | 2480 (21) | 10.6 |
| Semi Medium (2-4 ha) | 1095 (19) | 162 (14) | 1259 (18) | 1062 (20) | 11 (16) | 1204 (11) | 4.6 | 2984 (28) | 439 (27) | 3429 (28) | 2912 (27) | 383 (27) | 3298 (27) | 4.0 |
| Medium (4-10 ha) | 504 (9) | 64 (6) | 569 (8) | 534 (10) | 59 (7) | 594 (10) | -4.2 | 2942 (28) | 366 (23) | 3317 (27) | 3138 (30) | 345 (24) | 3490 (29) | -5.0 |
| Large (10 ha) | 79 (1) | 9 (1) | 90 (1) | 96 (2) | 10 (1) | 106 (2) | -15.1 | 1149 (11) | 134 (8) | 1327 (11) | 1419 (13) | 142 (10) | 1593 (13) | -16.7 |
| All Sizes | 5931 (100) | 1134 (100) | 7079 (100) | 5319 (100) | 894 (100) | 6221 (100) | 13.8 | 10625 (100) | 1616 (100) | 12307 (100) | 10651 (100) | 1413 (100) | 12109 (100) | 1.6 |

M: Male, F: Female, T: Total and P V: Percentage Variation.
Note: * Figures also includes number and area of institutional holdings, which are negligible.
Figures within brackets are percentages to the column totals.

Source: Agricultural Census 2000-01, Report on Operational Holdings in Karnataka, Part – I, Directorate of Economics and Statistics and State Agricultural Census Commissioner, Government of Karnataka, Page 25.

partnerships, the state is ushering India into the multi-billion dollar international market. Mr. Somanath, Managing Director of Food Karnataka Limited, reports that "the agri-food scene now is similar to the IT environment in the late'90s, when nobody believed in our state's pioneering venture, like ITPL or IT com. We are poised on the verge of a similar revolution in food-processing" (Times of India, 25th October, 2004). The Union government is partially funding food park projects in Karnataka and also keeping a benevolent eye on the state in this regard. Currently, the major competitors in food processing are China and India, and both the countries regard food processing as one of the important components of their future economy. Karnataka has already gave an indication of that; the Gherkin (small cucumber) revolution has turned many impoverished farmers into Lakhpathis. This trend is now being replicated in Maharastra

and Tamil Nadu. Gherkin (baby cucumber) is a much sought after delicacy in the US and in Europe. Gherkin soaked in vinegar is consumed as a pickle or as a salad ingredient. Its farming has now spread to districts of Hassan, Haveri, and right up to Bagalkot, and is grown exclusively for foreign markets. Currently, Karnataka has a 90 per cent share in India's gherkin exports. The six food parks coming up in each of Karnataka's six economic zones - Malur (Kolar), Maddur (Mandya), Hiriyur (Chitradurga), Gangarli (Belgaum), and Jewargi (Gulbarga) and then would mark the next major milestone. Construction work has commenced in these parks and they are expected to be fully operational in a year. The facilities will have provision for cold-storage, grading, processing, etc.

# CHAPTER 2

# REVIEW 0F LITERATURE

In this chapter, an attempt is made to review some of the existing literature on contract farming conducted in different countries in the world and also in India.

Tanya Korovkin (1992) examines the social implications of contract farming promoted in smallholdings in a Chilean community. The article highlights the probable advantages of contract farming, such as to elevate the rich peasants into the status OF peasants-capitalists rather than to cause the proletarianisation of the peasant community. This trend finds historical evidence in the agri-business spurts: the tobacco boom of the 1950s and the fruit export expansion of the `70s and `80s, and the resultant socio-economic and organisational development in a Chilean small-holding community. The inherent advantages of contract agriculture (not importantly the higher returns from land) seen to have motivated Chilien farmers. Though the fruit boom helped improve the income of landless families, mitigating marginally their poverty and insecurity, the very seasonal nature of employment, and therefore income, hardly allowed any radical change in their economic status.

Kiresur et.al. (2002) in their paper " Contract farming - An Opportunity for Small and Marginal Farmers in the context of Trade Liberalisation", brings out the true picture of Indian agriculture in general, and the exact position of small and marginal farmers in particular. They have highlighted several mis-matches in Indian agriculture vis-à-vis the agriculture scenario of developed countries though they concede that Indian farmers are participating and competing with their overseas counterparts in marketing agriculture commodities. They recommend contract farming in view of its advantages to both the farming community and contractors as one of the better options for fulfilling the objectives of the Liberalised trade Regime.

Sukpal Singh (2000) looks into the role of contract farming in agricultural diversification and development in terms of its practices and implications for producers and the Punjab economy. The paper focuses on the nature of contracts, studies the perceptions of both the farmer and the firm of the working of the contract system and its effect on the local economy. He highlights hat the summary of the studies on

contract farming “helped farmers for the better, gave more reliable incomes, generated employment especially for women, provided new skills in farming, and did away with the patron-client relationship between large and small producers” (Glover and Kusterer: 1990, Fulton and Clark: 1996). Contract farming has several disadvantages too: poor extension services, low prices to farmers due to haphazard pricing of the produce, inherent higher risk to cultivators, frequent delays in payment (Glover and Kusterer: 1990, Ghosh: 1994), weak bargaining power of farmers, sole dependence on companies for inputs as also credit (Fulton and Clark: 1996), over-exploitation of ground water and the threat of the environmental (Siddique: 1998) and finally, the fact that companies often move to new pastures (virgin plots) to exploit land and water resources at the least cost ,(Torres: 1997) leaving former cultivators high and dry.

One of the reasons for contract farming coming into existence in India was the Land Ceilings Act which stipulated that “agribusiness firms cannot own and cultivate land for their raw materials requirements,. to overcome the difficulties encountered in procuring from the open market, especially in perishables”. Therefore, the only option for agribusiness firms was to go in for contract farming to safeguard their interests.

The study reveals that for the success of contract farming, there is need for institutional and organisational innovations in the rural sector. Contract farming should be under scrutiny from time to time; wide publicity should be given of the land available for contract farming competitiveness; legal protection to be provided to growers under contract farming, and the Fair Trade Commission should monitor contract farming practices on a continuous basis.

Behrooz Morvaridi’s (1995) article on “contract farming and environmental risk: the case of Cyprus” examines the environmental degradation and productivity decline occasioned under contract farming in the context of citrus production in North Cyprus. The study highlights the changes in the terms and conditions of contract farming brought about by farmers’ access to key resources like water etc.. The paper highlights the fact that only large farmers are in a position to invest in irrigation to maintain productivity though this trend was found to be short-lived and that “corporate profits are made at the expense of long-term productivity for farmers”. Interestingly, irrigation costs were not included under the contract farming system and these were indeed a huge burden on the growers. Timely intervention of the Trans-National Corporation

(TNC) may help avoid over-exploitation of key resources. Irrigation with saline water has caused many fruit trees to dry up rendering large areas of land unproductive; incidence of this problem was found more in the case of marginalised farmers than their richer counterparts.

Ben White's study on "agri-industry and contract farmers in the hilly southern region of Upland West Java", covers two case studies i.e., the nucleus in one case (a small holder dairy farming co-operative), and the other (a small holder growing hybrid coconuts) a large nationalised plantation corporation under contract farming schemes. In both the cases, "contract farming communities deviate markedly from the neo-populist vision of homogeneous, modernising family farms, and the differentiation is quite marked and wage labour common". Further, the "institutional framework surrounding contract farmers is in serious need of democratisation the problem is not one of formal structures in need of revision but of actual function and subsistence of relationships, which reflect the nature and exercise of power in rural society" (Ben White (1997).

Piet Konings (1998) while evaluating the agro-industrial enterprises and plantation labour in Cameroon, focuses on the role of contract farmers co-operatives associated with Pamol, a subsidiary of the giant Unilever Company, in the southern west province of Anglophone Cameroon. A small number of large producers of palm oil dominates the co-operatives under the guidance of the Pamol company management and the State. In the early 1980s when the continuance of the company was at stake, farmers themselves started a co-operative. While renewing the contract with the above company, farmers demanded more autonomy vis-à-vis the company whose role was sought to be restricted to providing nurseries, transport and processing facilities.

Olesen's (2003) study on "contract production of peas" examines the contract between farmers and the processor viz., Denisco Foods who had 50 years of experience behind them and have 4,100 ha. The production of peas by farmers was in conformity with the exact requirements of consumers – an objective realised through centralised decision-making. The study focuses on "general problems known from contract theory such as hold-up, moral hazard, risk sharing, and discrimination", and proceeds to suggest that a trade-off between these problems is found in the design of contracts. It was evident that the terms and conditions of contracts had undergone some

modifications, and it is probable that cultivators were able to enhance their bargaining power through negotiations with the processor.

A study by Dileep et.al. (2002) on "Contract farming in tomato: An economic analysis" focuses on the cost, returns and resource use efficiency, and the effect of contract farming on price, production and income of farmers as also yield variation, marketing costs and the possible losses to farmers. The study was conducted in the Ellenabad block of Sirsa district in Haryana, where the contract system has been in practice since 1989. Two processing firms, viz., Hindustan Lever Limited (HLL) and Nijjer Agro Foods Ltd (NAL) were studied. A sample of 50 contract farmers were interviewed (30 under HLL & 20 under NAL), out of 125 tomato growers under the contract system, 50 non-contract farmers were also interviewed during 1999-2000.

The study reveals that the processing firms preferred large farmers for contract farming. The cost incurred, yield and gross return obtained by contract farmers were almost double compared with that of non-contract farmers. The uncertainty over yield and price was much less under contract farming. Surprisingly, the price received for tomato by non-contract farmers was found to be higher than that of contract farmers. Transportation cost was a major component of marketing costs. Farmers demanded that the contract between the farmer and the corporate should be enforceable by law; it is necessary through fresh legislation by the government. Over usage of inputs like fertilisers and pesticides should be brought down to ensure plant protection and to secure higher yields, and farmers need to be educated in this regard. A crop insurance scheme needs to be introduced for tomato farming which induces risk due to higher incidence of diseases and pest attack besides possible adverse climatic conditions.

Clapp (1994) examines the unequal representation of contract farming in Latin America. This could be because of this politics of representation, which is the prime reason for the social relations of contract farming. He suggests that an alternative representation of contract farming, which focuses on the contradictions of wage labour, has an indirect control over labour and an uncertain supply to farmers and that lead to disguised proletarianisation. The politics of representation can be absolved through regulating 'the moral economy of the contract' between the company and peasant community.

Contract farming has taken firm roots and is expanding in the agriculture sector of developed countries, whereas, in developing countries the agro-industrial integration is still to consolidate despite having made initial inroads (Watts: 1992). He argues that the "rural sector in the periphery is less a terrain of independent peasant production and commodity circulation through trade - or indeed of the state or direct foreign investment in estate production – than a crucible in which innovate forms of social integration and agrarian corporatism that link growers to state and private capital is forged".

Agriculture in Punjab has witnessed a second revolution, one of the prime promoters of it being Buta Singh Khullar who is among the growing band of rebels. It was his vision that led to crop diversification from traditional crops like wheat and paddy to the adoption of Hyola, a high yielding variety. These crops ensured food security in the country to a large extent. Secondly, chief minister Amerinder Singh's decision to appoint a committee head by S.S.Johl, who was earlier chairman of the Agriculture Costs and Prices and also Vice-Chancellor of Punjab Agriculture University, to take-up promotion of crops other than wheat and paddy. The Johl committee report recommended that millions of acres under wheat and paddy needed to be brought under other crops, and suggested a Central Government assistance of Rs,1,280 crores to the state government for 'crop adjustment programme', whereby Rs 12,500 per hectare was to be given to farmers to adopt crop diversification (to avoid risk). Similar demands were put forth by other states, which resulted in the above suggestion not being accepted.

Another remedy put forth by the committee was to adopt contract farming to reduce the burden on Punjab Agro Industries Corporation. The book on "Green Revolution Reconsidered", highlights the need for crop diversification. Several other researches, too, have endorsed the above opinion. Since then, contract farming has expanded considerably - from 12,000 acres in 2002-03 to 25,000 acres in 2003-04. (Ranju Sarkar: 2004). With this unique contract farming experiment, Punjab is trying to develop a diversified portfolio of crops that can compete with wheat and paddy. The high yielding varieties of oilseeds such as Hyola can give higher returns of Rs 13,300 per acre as compared Rs 10,000 from wheat. Crops grown under contract farming are generally short duration crops, while some are traditional crops.

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Rangi and Sidhu's (2003) paper, "Contract Farming in Punjab", examines some of the policy issues related to contract farming in the Punjab State Scheme. The data was culled out of the report of Punjab Agro-Foodgrain Corporation Ltd, Chandigarh, and covers many advertisements in the newspaper on contract farming as also responses of the few contract farmers who were interviewed. Again after a gap of 16 years, the S.S.Johl committee has been reconstituted. The committee recommended that in 10 lakh hectares now under paddy and wheat crops, crop rotation should be introduced to replace paddy/wheat by crops that consume less water to check the adverse effects on the ecology and also to meet the demand for such produces in the country. "Vegetable crops are more labour intensive and can provide 4-5 times more employment opportunities in rural areas, as compared with wheat and paddy crops", says the report.

# CHAPTER 3

# OBJECTIVES AND METHODOLOGY

The following are the objectives and methodology of the study:

1. To make an inventory of on-going contract farming in Karnataka, including data on the structure of contract farming agreements between primary producers and buyers;
2. To examine the type of crop/ activity taken up under contract farming;
3. To assess the impact on income and employment generation for contract farmers and their perceptions on the continuation of the same. Further, the benefits accrued to the concerned company/firm in terms of meeting local demand and that of the export market;
4. And finally, to suggest policy issues, if any, for the sustainability of contract farming.

**Methodology:**

There are 25 firms currently involved in contract farming in Karnataka (for details see Appendix I). All the 25 firms have selected Gherkin (small cucumber) as a crop to cultivate under contract farming, spread over districts of Tumkur, Bellary and Haveri. Tumkur has been selected because of its proximity to the study area. The reference year for the study is 2002-2003. There are 10 companies involved in promoting Gherkin in Tumkur district. The field visits confirm that firms like Global Green Company (GGCL), Unicorn, Reitzel, Vishal and Intergarden are leaders in contract farming business in the district. Table 3.1 gives the details of company, taluk/s, village/s and the number of

**Table 3.1: Selected Taluks, Companies, Villages and Sample Contract Farmers in Tumkur District**

| Sl.No | Name of the Taluk | Name of the Company | Name of the Village | Sample HHs |
|---|---|---|---|---|
| 1. | Gubbi | UNICORN | Appanahalli | 11 |
| | | | Unaganahalli | 10 |
| | | | Hosakere | 9 |
| 2. | Tiptur | REITZEL | Gowdanakatte | 16 |
| | | | Shivapura | 14 |
| 3. | Gubbi | VISHAL | Ankasandra | 15 |
| | | | Dasappanahalli | 15 |
| 4. | Sira | GGCL | Gopikunte | 8 |
| | | | Hosahalli | 5 |
| | | | Kammanahalli | 6 |

| | | | | |
|---|---|---|---|---|
| 5. | Gubbi | | Hosakere | 11 |
| 5. | Gubbi | INTERGARDEN | Bidare | 30 |

contract farmers covered in the study. Contract farming is concentrated in taluks like Gubbi, Tiptur and Sira of Tumkur district. Gubbi and Sira taluks form the hub of contract farming activities in the district. Five leading companies are chosen and these covers 11 villages and 30 contract farmers, representing different sizes of holdings. Executives of the above companies extended their co-operation in furnishing relevant details for the study. Therefore, the above companies are chosen for the in-depth study.

Table 3.2 furnishes details of the characteristic features of the selected villages in the study area. Bidare and Hosakere villages in Gubbi taluk have a big population; the rest are small and tiny villages with a few households and a population of less than 1,000. By and large, these villages were found to have basic amenities like schools, drinking water, transport, a combination of pucca and kachha roads and electricity.

The source of irrigation and other details in the study area are given in Table 3.3. It is interesting to note that all selected villages (barring Shivapura and Gowdanakatte in Tiptur taluk and Unaganahalli in Gubbi taluk) had less or no area at all under irrigation as reported in the 1991 Census, but currently these villages have borewells and also irrigated lands, which is one of the primary criteria for a company to identify a village for contract farming. Except Unaganahalli, the other selected villages do not have any forest cover. However, these villages do have cultivable waste lands/or areas not available for cultivation currently.

**Table 3.2: Characteristic Features of Selected Villages in the Study Area**

| Sl.No. | Name of the Village | Area (Ha) | Popula-tion | House holds | Educa tion | Medical Facilities | Drinking Water | Post Office/ph | Commu-nication | Approach To Village | Nearest Town | Power Supply |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | GUBBI TALUK | | | | | | | | | | | |
| 1 | Ankasandra | 609 | 937 | 197 | P, M | -(5-10) | W, HP | P O | Bus | P R | G - 18 | E A |
| 2 | Dasappanahalli | 561 | 356 | 73 | P, M | -(5-10) | W, HP | -(0-5) | -(0-5) | P R | G- 20 | E A |
| 3 | Hosakere | 311 | 1614 | 348 | P2, M, H | PHC, FHC | W, TW, HP | P O/Ph | Bus | P R | G- 30 | E A |
| 4 | Bidare | 495 | 2301 | 483 | P2, M, H | PHC | TW, HP | P O/Ph | Bus | P R | G- 11 | E A |
| 5 | Kammanahalli | 216 | 674 | 151 | P | -(0-5) | W, HP | -(0-5) | -(0-5) | P R | G- 21 | E A |
| 6 | Appanahalli | 248 | 719 | 144 | P | -(5-10) | W, HP | -(0-5) | Bus | K R | G- 34 | E A |
| 7 | Unaganahalli | 796 | 591 | 118 | P | -(0-5) | W, HP | -(0-5) | Bus | P R | G- 32 | E A |
| | TIPTUR TALUK | | | | | | | | | | | |
| 1 | Gowdanakatte | 440 | 698 | 140 | P2, M, H | -(0-5) | W, HP | -(0-5) | Bus | K R | Tip- 22 | E A |
| 2 | Shivapura | 102 | 416 | 73 | P | -(5-10) | W, HP | -(0-5) | Bus | K R | Tip- 11 | E A |
| | SIRA TALUK | | | | | | | | | | | |
| 1 | Gopikunte | 317 | 706 | 131 | P | -(0-5) | W, HP | -(0-5) | -(0-5) | P R | Sira- 22 | E A |
| 2 | Hosahalli | 377 | 498 | 96 | P | -(10+) | W, HP | -(0-5) | -(0-5) | K R | Sira- 20 | E A |

Note: P- Primary, M: Middle, H: Higher school, PO: Post Office, Ph: Telephone, BS: Bus, PHC: Primary Health Centre, FPC: Family Planning Centre, W: Well, HP: Hand Pump, PR: Pucca Road, KR: Katcha Road, EA: Electricity Available.
Source: Census of India 1991, Series- II, Part XII- A, District Census Hand Book, Tumkur District.

**Table 3.3: Source of Irrigation and Other details in the Study Area.**

| SL.No. | Name of the Taluk / Village | Total Area (in Ha) | Tank | Well | Well with Electricity | Govt. Canal/ Tube Well | Total Irrigated Area (Ha) | Un-Irrigated Land (Ha) | Forest (Ha) | Cultivable Waste (Ha) | Area Not Available For Cultivation. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | GUBBI | | | | | | | | | | |
| 1 | Ankasandra | 609 | 24 | - | 7 | 14 | 45 | 411 | - | 133 | 20 |
| 2 | Dasappanahalli | 561 | - | 4 | 12 | - | 16 | 186 | - | 354 | 5 |
| 3 | Hosakere | 311 | 48 | 8 | 26 | - | 82 | 130 | - | 18 | 81 |
| 4 | Bidare | 496 | 43 | 10 | 19 | - | 72 | 343 | - | 16 | 65 |
| 5 | Kammanahalli | 216 | - | 7 | 13 | - | 20 | 161 | - | 17 | 19 |
| 6 | Appanahalli | 248 | - | 4 | 11 | - | 15 | 197 | - | 28 | 8 |
| 7 | Unaganahalli | 796 | - | - | 3 | - | 3 | 192 | 325 | 77 | 199 |
| | TIPTUR | | | | | | | | | | |
| 1 | Gowdanakatte | 440 | 1 | - | - | - | 1 | 256 | - | 68 | 115 |
| 2 | Shivapura | 102 | - | - | - | - | - | 80 | - | 4 | 18 |
| | SIRA | | | | | | | | | | |
| 1 | Gopikunte | 317 | 6 | - | 8 | - | 14 | 199 | - | 10 | 93 |
| 2 | Hosahalli | 377 | 13 | - | - | 15 | 28 | 229 | - | 35 | 85 |

Source: Same as Table 2.

# CHAPTER 4

# PROFILE OF THE SELECTED COMPANIES WORKING IN THE STUDY AREA

This chapter attempts to furnish a brief profile of the companies operating in the study area.

## 1. Global Green Company Limited

Global Green Company Limited (GGCL) is one of the largest industrial units owned by the Thapar Group, a widely respected business house around the globe, which has been making sustained contributions to the Indian economy since the past 80 years. Now, the Thapar Group concentrates on the most important segment of the economy – agriculture. With its emphasis on introducing innovative techniques in the agricultural sector to bring it on a par with global standards, GGCL stands by the philosophy of its founding fathers.

**ORGANISATIONAL CHART**

GGCL's aim is to enable Indian farmers to produce internationally acceptable crops and other products. The company concentrates on small and marginal farmers, disseminating sophisticated technology viz., an excellent package of agricultural practices, a buy-back system at pre-notified prices. The Thapar Group has a vision to holistically develop the horticultural sector with the aid of sophisticated technology and by educating the farmers about efficient cultivation techniques. It also focuses on stepping-up productivity, making assured supply of inputs, constant improvement of production through rigorous research and development techniques. The company's philosophy is evident at different levels viz., agricultural inputs, cultivation, harvesting, processing, packaging, delivery and customer care. GGCL has been awarded ISO 9002 certification for excellence in processing and marketing of preserved foods and vegetables. GGCL products are exported to several European countries, besides many others.

**2. Unicorn Agro-Tech Ltd:**

The selection criteria for the land and farmers are as follows:

a. Normally lands with red soil mixed with sand is preferred;
b. Stagnation of water should be avoided;
c. Assured irrigation facilities a must'
d. Preference would be given to own land (sometimes leased-in land is also considered)'
e. There should be optimum size of family labour.

After identifying lands with the above requirements a contract agreement is signed between the company and the identified farmer. The agreement would lay down that the farmer would grow gherkins according to the company's direction, supply good quality gherkins by grades as prescribed by the company, and also that the farmer should not sell the produce in the open market.

The company then provides technical guidance for preparing the land for cultivation of gherkin crop. The company supplies inputs like seeds, fertilisers, pesticides, GI Wire, jute thread and plastic thread.

The company provides transport facilities to lift the harvested gherkins from the farmer's field and fortnightly payments (after deduction of the cost of inputs supplied to the farmer) are made. The mode of payment are cheques issued in the farmer's name.

**ORGANISATIONAL CHART**


In the appointment of field officers, complete preference is given to local candidates, because they normally would have good knowledge about the villages and the farmers. Through local field officers the company develops trust among farmers. In other words, FOs act as a facilitator between the company and the farmer, conscious of the company's requirements and expectations from farmers. Gherkin grades and price per kg is indicated in Table 4.1.

**Grading System:**

**Table 4.1: Gherkin Grade/s and the Prices.**

| GRADES | PRICE (Rs. Per Kg) |
|---|---|
| 160+ = 160 - 180 | 10.50+0.50=11 |
| 60+ = 100 - 160 | 7.00 |
| 30+ = 60 - 100 | 4.00 |
| -30 - 60 | 2.00 |

As per determined grades, filters are manufactured and weighed by the buying assistants and entered into the Passbook. Later, the buyers take the gherkins to the Collection Centre and after securing a gate pass, take the produce to the main factory for processing and export to the contracted country/s.

**Intergarden (India) Pvt. Ltd.**

Intergarden (India) Pvt.Ltd, (located at Nelamangala on National Highway 48 of Bangalore (Rural) district, Karnataka, India), is one of the leading promoters of gherkin cultivation besides being an exporter of semi-processed gherkin products and other vegetables to selected European countries. The company is a fully-owned subsidiary of Dunakiliti Konzervuzen Kft, Hungary (Company Profile Leaflet). Through contract farming, Intergarden act as a facilitator in growing gherkin in selected districts of Karnataka viz., Bangalore (Rural), Kolar, Tumkur and Hassan. The company has a full-fledged processing unit to cater to 4,460 farmers spread over 586 villages (for details see Table 1) covering a 100 sq km area. The company commands a high degree of professional expertise at all levels of agricultural operations. The company is known internationally for adapting agricultural know-how for dissemination to farmers. Further, company's products conform to the standards sought by consumers around the globe. Intergarden is currently in the process of implementing EUREPGAP standards at the farm level. Intergarden has high class infrastructure facilities required to handle production safely and high quality food products of 10,000 MT. The products conform to global food standards. Regarding research and development, the company has a team of highly skilled scientists who constantly endeavour to develop newer varieties of gherkins and other vegetables particularly more nutritious and disease-resistant varieties. The company has also entered into an R&D collaboration with the University of Agricultural Science, Bangalore.

The performance of Intergarden (India) Pvt. Ltd in Karnataka covering a number of districts, taluks, villages and number of farmers as on 6th October, 2004 is given in Table 4.2.

**Table 4.2: Performance of Intergarden (India) Pvt. Ltd. In Karnataka**

(as on 6.10.2004)

| Sl. No | District | Area | No. of Villages | No. of Farmers |
|---|---|---|---|---|
| 1 | Bangalore (Rural) | Thyamagondlu | 37 | 137 |
| 2 | Kolar | Gowribidanur | 89 | 530 |
| 3 | Kolar | Koratagere | 44 | 233 |
| 4 | Tumkur | Bukkapattana | 54 | 665 |
| 5 | Tumkur | Chelur | 80 | 1066 |
| 6 | Tumkur | Thuruvekere | 129 | 824 |
| 7 | Tumkur | Kunigal | 87 | 448 |
| 8 | Hassan | Arasikere | 66 | 557 |
| Total | 4 | 8 | 586 | 4460 |

Inputs supplied by the company include seeds, fertilisers, pesticides, G I wire, jute thread, plastic thread, transport facility and technical guidance. Field life of gherkin is 40 days, while that of crops, the duration is 60 days because of its late harvest. The company advises the farmers to sow in April for optimum yield. The average income from the gherkin is around Rs 30,000 per acre and the volume of yield is about 6 MT.

The grades and prices per kilogramme of gherkins given by Intergarden company is furnished in Table 4.3.

**Table 4.3: The Grades and Prices of Intergarden Company**

| Grade | Intergarden Specification | Price per Kg.(in Rs) |
|---|---|---|
| I | Intergarden Premium | 11 |
| II | Integarden Standard | 7 |
| III | Intergarden Regular | 3 |

The comparative picture of gherkin cultivation in India and abroad is given in Table 4.4. It indicates the cultivation of gherkin according to seasons, the availability of labour, wage rates, temperature and the type of irrigation in two different situations.

**Table 4.4: Comparative Study of Gherkin Cultivation in India and Abroad**

| Sl.No. | India | Abroad |
|---|---|---|
| 1 | Can be Grown in Three Seasons | One Season: April-May |
| 2 | Labour Abundance | Scarcity of Labour |
| 3 | Low Wages Rs25-40 | High Wages: $ 5 per hour |
| 4 | Favourable Temperature | -20 Degree |
| 5 | Manual Irrigation | Drip Irrigation with Fertigation |

Since Intergarden Company caters to an export market and in order to match the demand for gherkins abroad, seeds are supplied to farmers in advance. In other words, higher the demand abroad higher is the extent of land sought to be brought under gherkin. The company plans in such a way that the staff has work throughout the year. One of the staff member said that in western countries, the government would provide subsidy to farmers (Rs 9/ per Kg) who grew gherkin.

Intergarden is also a member of the gherkin Promoters Association. We also understand that Intergarden is the only company to get the "EUREPGAP" Certificate.

**Reitzel India Private Limited**

Hugo Reitzel started a grocery company in French-speaking Switzerland, and after about 100 year, the company was christened after him (See Reitzel Company Leaflet). The company's products include: pickles (gherkins, onions, mixed pickles), olives and capers, pickled vegetables (carrots, celery, beetroot), mustards and vinegars, ketchup and mayonnaise, salad dressings and fresh sauces (hot and cold).

The company's prime objective is to ensure taste and quality from seed to feed. It follows a rigorous follow-up and verification policy right from seed stock delivered to farmers and right up to the production and packaging of the output in the factory. For example, despite the acclaimed quality of gherkins brought in India, Reitzel has set up a quality team which has been given the responsibility of selecting suppliers and ensuring strict application of its quality criteria. Reitzel, a medium-sized company, which caters to the demands of the consumers, got the ISO 9001 certificate in 1996 and, since then, it has been maintaining the high quality standard for each of its products.

The Development of the Reitzel Group over the years is as follows:

1909: Hugo Reitzel opens his specialised grocery shop in Aigle French-speaking Switzerland.

1960: Enters industrial and commercial agreements with Grey-Poupon in Dijon (France).

1986: Bernard Poupon takes over the administration of Reitzel Company (Switzerland) and creates the Poupon Reitzel Industries holding company one year later.

1990: The holding company acquires the Turkish company, Zey-Tur-San.

1995: Takes over the Conserveries Besiers in Castelsarrasin (France).

1999: Launch of the Hugo Reitzel brand in the Swiss market.

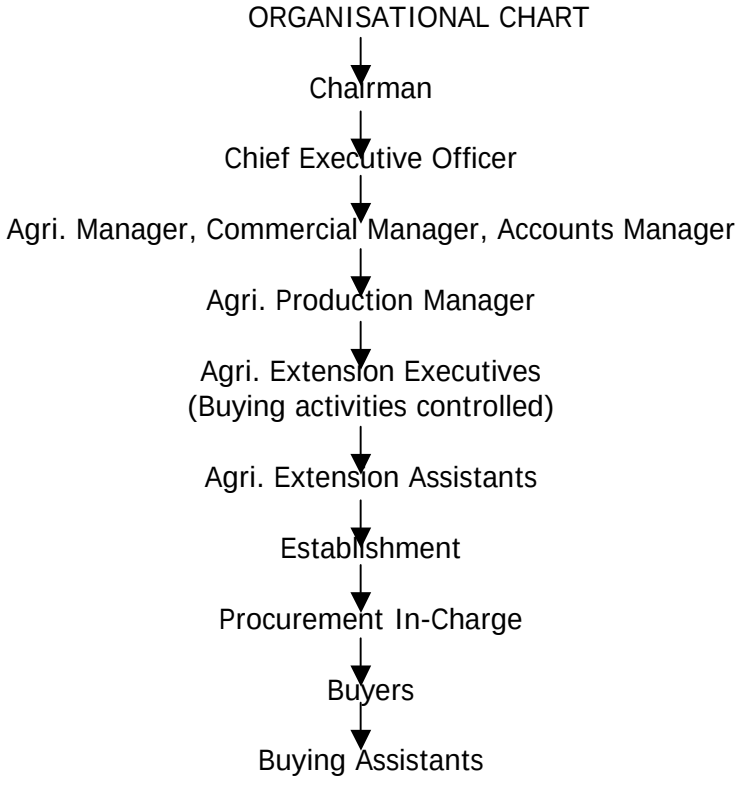
2000: Acquisition of the Guy Briand Company in Bourre (France) and creation of a quality service office in Bangalore (India).

2001: Creation of Reitzel Romania.

2002: The Group assumes the name, Reitzel.

2003: Reitzel India is created.

Like other companies, Reitzel also provides input, a package of practices, purchase the gherkins from farms and also gives transport facilities to farmers. Company's field staff visits farms daily; company's professional experts like agricultural extension officer, visit farms twice a week.



Grades, filter sizes and contract prices fixed by Reitzel is given in Table 4.5.

**Table 4.5: Grades and Contract Prices in the Reitzel Company**

| Grade | Filter Size (in mm) | No. of Gherkins (Per Kg) | Contract Price (in Rs / Per Kg) |
|---|---|---|---|
| RI- A | 14mm | 160+ | 11.00 |
| RI- B | 20mm | 60-160 | 6.00 |
| RI- C | More than 20mm | -60 | 2.00 |

**Vishaal Natural Food Products**

Vishaal Natural Food Products (a sole proprietary concern) (VNFP) was established in 1998 near Korategere town, Tumkur District. The thrust areas of VNFP are sectors like agriculture and exports of agricultural products. Madhusudan, the present chairman of VNFP, intends to set up a 100 per cent export-oriented unit (EOU) to process and export gherkins (hybrid cucumber).

**Field :**

Contract farming method was adopted to procure produce from over 600 farmers spread over 40 villages, covering Chitradurga and Tumkur districts and providing farmers technical and financial support by way of advancing inputs (seeds, fertilisers, pesticides and growth promoters) to farmers. The price of the produce (based on the grades) would be agreed upon before the crop is sowed and an understanding on payments is arrived upon. Farmers are given guidance through the company employed field assistants and field officers who have expertise in agriculture. Officials of VNFP, those from the industry like seed and pesticide suppliers and university professors make regular visits. The company takes appropriate measures regularly to improve crop standards.

**Processing :**

VNFP has a four-acre office complex, which can store about 30 MT of fresh produce everyday. Also the company has cold storage facility to accommodate 15 MT of produce. The infrastructure like machinery to clean, wash and grade gherkins is of international standard. Gherkins are moved to cold storage as they arrive from the fields in the evening, and are taken for processing the following day; processing, i.e, cleaning, washing and drying is done by women employees. The graded product is put into drums with the desired solution (i.e., brine, acetic acid or vinegar). The processed product is subjected to quality checks before being packed and shipped.

**Market :**

VNFP is presently exporting gherkins to USA, Canada, France, Spain, Italy, Netherlands, Japan, Australia and Thailand.

**Turnover :**

The company's turnover was Rs 630 lakh during 2003-04.

# CHAPTER 5

## SOCIO-ECONOMIC CHARACTERISTICS OF CONTRACT FARMERS

The distribution of contract farmers (Head of the Household) by selected company and size class is given in Table 5.1. Of the total 150 Contract farmers selected, small and marginal farmers constitute 52 per cent, medium farmers 38 per cent, and large farmers 10 per cent. And from each of the five companies, 30 contract farmers representing all the sizes of holdings were selected and interviewed for the study.

**Table 5.1: Distribution of Contract Farmers (CFs) by Company and Size Class**

| Size Class | Name of the Companies | | | | | Total |
|---|---|---|---|---|---|---|
| | IG | GGCL | REITZEL | UNICORN | VISHAAL | |
| Marginal | 10 | 9 | 5 | 7 | 6 | 37 |
| % | 33.3 | 30.0 | 16.7 | 23.3 | 20.0 | 24.7 |
| Small | 7 | 7 | 7 | 10 | 9 | 40 |
| % | 23.3 | 23.3 | 23.3 | 33.3 | 30.0 | 26.7 |
| Medium | 10 | 11 | 14 | 11 | 11 | 57 |
| % | 33.3 | 36.7 | 46.7 | 36.7 | 36.7 | 38.0 |
| Large | 3 | 3 | 4 | 2 | 4 | 16 |
| % | 10.0 | 10.0 | 13.3 | 6.7 | 13.3 | 10.7 |
| Total | 30 | 30 | 30 | 30 | 30 | 150 |
| % | 100 | 100 | 100 | 100 | 100 | 100 |

Tables 5.2 & 5.3 provide the age profile of CFs (HHS) by size class and company affiliation in the study area. Seventy per cent of heads of households of CFs are in the age group of 26 to 50 years, 25 per cent are above 51 years, and less than five per cent below 25 years. Similar are the trends observed across the size of holdings in the case of small and medium farmers. In the case of large farmers, 50 per cent of CFs are in the age group of around 50 or 50 plus: and eight out of 150 CFs are below 25 years.

**Table 5.2 : Age Classification of CFs (HHs) by size class**

| Size Class | Age Classification | | | |
|---|---|---|---|---|
| | <25 | 26 to 50 | 51 to 75 | Total |
| Marginal | 2 | 31 | 4 | 37 |
| % | 25.0 | 29.5 | 10.8 | 24.7 |
| Small | 2 | 28 | 10 | 40 |
| % | 25.0 | 26.7 | 27.0 | 26.7 |
| Medium | 3 | 39 | 15 | 57 |
| % | 37.5 | 37.1 | 40.5 | 38.0 |
| Large | 1 | 7 | 8 | 16 |
| % | 12.5 | 6.7 | 21.6 | 10.7 |
| Total | 8 | 105 | 37 | 150 |
| % | 100 | 100 | 100 | 100 |

All the five companies taken together, around 75 per cent of the CFs are in the age group of 26 to 50 years. REITZEL and UNICORN selected CFs around 40 per cent in the age group of 51 plus years. The distribution of CFs within the company across the size of holdings, small and marginal CFs constitute around 55 per cent, medium CFs category 35 per cent and large CFs 10 per cent in the study area.

**Table 5.3: Age Classification by Name of the company and size class**

| | | Name of the company | | | | | Total |
|---|---|---|---|---|---|---|---|
| Size Class | Age | IG | GGCL | REITZEL | UNICORN | VISHAL | |
| Marginal | <25 | 2 | | | | | 2 |
| | | 20.0 | | | | | 5.4 |
| | 26 to 50 | 8 | 8 | 4 | 5 | 6 | 31 |
| | | 80.0 | 88.9 | 80.0 | 71.4 | 100.0 | 83.8 |
| | 51 to 75 | | 1 | 1 | 2 | | 4 |
| | | | 11.1 | 20.0 | 28.6 | | 10.8 |
| | Sub-Total | 10 | 9 | 5 | 7 | 6 | 37 |
| | | 100 | 100 | 100 | 100 | 100 | 100 |
| Small | < 25 | 2 | | | | | 2 |
| | | 28.6 | | | | | 5.0 |
| | 26 to 50 | 5 | 5 | 3 | 8 | 7 | 28 |
| | | 71.4 | 71.4 | 42.9 | 80.0 | 77.8 | 70.0 |
| | 51 to 75 | | 2 | 4 | 2 | 2 | 10 |
| | | | 28.6 | 57.1 | 20.0 | 22.2 | 25.0 |
| | Sub-Total | 7 | 7 | 7 | 10 | 9 | 40 |
| | | 100 | 100 | 100 | 100 | 100 | 100 |
| Medium | < 25 | 2 | | | 1 | | 3 |
| | | 20.0 | | | 9.1 | | 5.3 |
| | 26 to 50 | 7 | 8 | 10 | 5 | 9 | 39 |
| | | 70.0 | 72.7 | 71.4 | 45.5 | 81.8 | 68.4 |
| | 51 to 75 | 1 | 3 | 4 | 5 | 2 | 15 |
| | | 10.0 | 27.3 | 28.6 | 45.5 | 18.2 | 26.3 |
| | Sub-Total | 10 | 11 | 14 | 11 | 11 | 57 |
| | | 100 | 100 | 100 | 100 | 100 | 100 |
| Large | <25 | 1 | | | | | 1 |
| | | 33.3 | | | | | 6.3 |
| | 26 to 50 | 2 | 2 | 1 | | 2 | 7 |
| | | 66.7 | 66.7 | 25.0 | | 50.0 | 43.8 |
| | 51 to 75 | | 1 | 3 | 2 | 2 | 8 |
| | | | 33.3 | 75.0 | 100.0 | 50.0 | 50.0 |
| | Sub-Total | 3 | 3 | 4 | 2 | 4 | 16 |
| | | 100 | 100 | 100 | 100 | 100 | 100 |

Table 5.3 (Conti...)

| | | | | | | |
|---|---|---|---|---|---|---|
| Total <25 | 7 | - | - | 1 | - | 8 |
| % | 23 | | | 3 | | 5 |
| 26 to 50 | 22 | 23 | 18 | 18 | 24 | 105 |
| % | 74 | 77 | 60 | 37 | 20 | 70 |
| 51 to 75 | 1 | 7 | 12 | 11 | 6 | 37 |
| % | 3 | 23 | 40 | 37 | 20 | 25 |
| Grand | 30 | 30 | 30 | 30 | 30 | 150 |
| Total % | 100 | 100 | 100 | 100 | 100 | 100 |

The marital status of the CFs (HHs) by size class is shown in Table 5.4. Over 93 per cent of contract farmers are married. Similarly, over 95 per cent of the small and marginal farmers are married.

**Table 5.4: Marital Status of CFs ( HHs) by Size Class**

| Size Class | Marital Status | | |
|---|---|---|---|
| | Married | Unmarried | Total |
| Marginal | 35 | 2 | 37 |
| | (94.6) | (5.4) | (100) |
| Small | 38 | 2 | 40 |
| | (95.0) | (5.0) | (100) |
| Medium | 52 | 5 | 57 |
| | (91.2) | (8.8) | (100) |
| Large | 15 | 1 | 16 |
| | (93.8) | (6.3) | (100) |
| Total | 140 | 10 | 150 |
| | (93.3) | (6.7) | (100) |

Note: Figures in the brackets denote percentage to total.

Tables 5.5 & 5.6 indicate the educational status of CFs by size class. By and large, CFs have a high literacy rate (99 per cent). CFs who have studied beyond primary and high school levels account for 69 per cent and 19 per cent respectively. It is interesting to note that almost all the CFs identified by the companies were literates (Table 6).

**Table 5.5: Educational Level of the CFs by Size Class**

| Size Class | Educational Level | | | | |
|---|---|---|---|---|---|
| | Illiterate | Primary | High School | Graduation | Total |
| Marginal | 1 | 5 | 23 | 8 | 37 |
| % | 2.7 | 13.5 | 62.2 | 21.6 | 100 |
| Small | 1 | 10 | 26 | 3 | 40 |
| % | 2.5 | 25.0 | 65.0 | 7.5 | 100 |
| Medium | | 10 | 34 | 13 | 57 |
| % | | 17.5 | 59.6 | 22.8 | 100 |
| Large | | 4 | 7 | 5 | 16 |
| % | | 25.0 | 43.8 | 31.3 | 100 |
| Total | 2 | 29 | 90 | 29 | 150 |
| % | 1.3 | 19.3 | 60.0 | 19.3 | 100 |

**Table 5.6: Educational Level of the CFs by Selected Companies**

| Name of the Company | Educational Level | | | | |
|---|---|---|---|---|---|
| | Illiterate | Primary | High School | Graduation | Total |
| IG | | 9 | 18 | 3 | 30 |
| | | 30.0 | 60.0 | 10.0 | 100 |
| GGCL | 2 | 4 | 20 | 4 | 30 |
| | 6.7 | 13.3 | 66.7 | 13.3 | 100 |
| REITZEL | | 5 | 17 | 8 | 30 |
| | | 16.7 | 56.7 | 26.7 | 100 |
| UNICORN | | 5 | 21 | 4 | 30 |
| | | 16.7 | 70.0 | 13.3 | 100 |
| VISHAAL | | 6 | 14 | 10 | 30 |
| | | 20.0 | 46.7 | 33.3 | 100 |
| Total | 2 | 29 | 90 | 29 | 150 |
| | 1.3 | 19.3 | 60.0 | 19.3 | 100 |

The demographic profile of CFs by size class is given in Table 5.7. The average size of CFs is 6.7. The size of holdings and the average size of family are positively correlated. The number of male children (0-14 age group) and female children to the total population, on an average, all the size classes show the same percentage (18 per cent). Similar trends are also witnessed in the case of male adults (15-50 age group) and female adults (22 per cent), and also male elders (50 and above) and female elders (9 per cent). Nevertheless, across the size of holdings there exists a mixed trend. It is observed that smaller the holdings the percentage of female adults and slightly less percentage in the case of larger holdings. It is noteworthy that dependents (children and elders) are less in percentage term in the case of small holdings as compared to their larger counterparts.

**Table 5.7: Demographic Profile of the Sample Households**

( Per cent)

| Size Class | Male children | Male Adults | Male Elders | Female Children | Female Adults | Female Elders | Total Popula-tion | Average Size of Family |
|---|---|---|---|---|---|---|---|---|
| Marginal | 19 | 27 | 7 | 19 | 24 | 4 | 188 | 5.0 |
| Small | 15 | 23 | 10 | 20 | 23 | 9 | 265 | 6.6 |
| Medium | 15 | 23 | 11 | 18 | 22 | 10 | 371 | 6.5 |
| Large | 20 | 21 | 8 | 20 | 20 | 10 | 177 | 11.1 |
| Total | 18 | 23 | 9 | 19 | 22 | 8 | 1001 | 6.7 |

Table 5.8 & 5.9 furnish details of male and female members of CFs involved in agriculture by size class and affiliated companies. Of the total population of 1,001 (Table 5.7), 71 per cent (709) are into agriculture. All the companies put together, 52 per cent of the total members involved in agriculture were females and the rest male. A similar trend exists across the five companies operating in the study area.

**Table 5.8: Population into Agriculture by Size Class**

| Size Class | Males Involved in Agriculture | Females Involved in Agriculture | Total |
|---|---|---|---|
| Marginal | 67 | 65 | 132 |
| Small | 90 | 100 | 190 |
| Medium | 129 | 139 | 268 |
| Large | 58 | 61 | 119 |
| Total | 344 | 365 | 709 |

**Table 5.9: Population into Agriculture by company**

| Name of the company | Males Involved in Agriculture (%) | Females Involved in Agriculture (%) | Total | Actual |
|---|---|---|---|---|
| IG | 48 | 52 | 100 | 118 |
| GGCL | 47 | 53 | 100 | 132 |
| REITZEL | 49 | 50 | 100 | 157 |
| UNICORN | 46 | 54 | 100 | 143 |
| VISHAAL | 46 | 54 | 100 | 159 |
| Total | 48 | 53 | 100 | 709 |

The distribution of CFs by caste and size class is given in Table 5.10. Of the 150 CFs covered in the study area, backward castes (BCs) and SC/STs form 89 per cent and 11 per cent respectively while the percentage figures across size classes vary significantly. It is interesting to note that BCs and SC/STs among marginal farmers account for 68 per cent and 32 per cent respectively. In other words, the numbers of SC/STs are more among marginal farmers than among the others. This trend could be attributed to 1) the land gained by SC/STs through land distribution by the state, and 2) sub-division and fragmentation of land among family members over the years. Higher size of holdings are negligible in the SC/ST category.

**Table 5.10: Distribution of CF Households By Caste and Size Class**

| Size Class | Caste | | Total |
|---|---|---|---|
| | BC | SC & ST | |
| Marginal | 25 | 12 | 37 |
| % | 67.6 | 32.4 | 100 |
| Small | 39 | 1 | 40 |
| % | 97.5 | 2.5 | 100 |
| Medium | 54 | 3 | 57 |
| % | 94.7 | 5.3 | 100 |
| Large | 16 | - | 16 |
| % | 100 | - | 100 |
| Total | 134 | 16 | 150 |
| % | 89.3 | 10.7 | 100 |

Table 5.11 furnishes details of the type of dwellings of the CFs by size class. Almost all CFs own pucca houses, 88 per cent of which have tiled roof; eight per cent have thatched roof and four per cent have RCC roof. Higher the size of land holdings better is the quality of housing. Among small holdings, the picture seems to be quite the opposite.

**Table 5.11: Type of House of the CFs by Size Class**

| Size Class | Type of House | | | Total |
|---|---|---|---|---|
| | Thatched Roof | Tiled | RCC | |
| Marginal | 8 | 29 | - | 37 |
| % | 21.6 | 78.4 | - | 100 |
| Small | 1 | 39 | - | 40 |
| % | 2.5 | 97.5 | - | 100 |
| Medium | 3 | 53 | 1 | 57 |
| % | 5.3 | 93.0 | 1.8 | 100 |
| Large | | 11 | 5 | 16 |
| % | | 68.8 | 31.3 | 100 |
| Total | 12 | 132 | 6 | 150 |
| % | 8.0 | 88.0 | 4.0 | 100 |

Information on the number of CF households involved in agriculture both Before Contract Farming (BCF) and After Contract farming (ACF) is given in Table 5.12. The number of CF household members involved in agriculture registered a marginal increase i.e., two per cent after the introduction of contract farming. But the percentage increase is higher in the case of small farmers than large farmers.

**Table 5.12: Number of Members Involved in Agriculture Before and During Contract Farming**

| Size Class | Members Involved in Agriculture BCF | Members Involved in Agriculture DCF | Total Population | BCF % | DCF % | Total |
|---|---|---|---|---|---|---|
| Marginal | 132 | 140 | 118 | 70 | 74 | 100 |
| Small | 190 | 200 | 265 | 72 | 75 | 100 |
| Medium | 268 | 275 | 371 | 72 | 74 | 100 |
| Large | 119 | 119 | 177 | 67 | 67 | 100 |
| Total | 709 | 734 | 1001 | 71 | 73 | 100 |

Note: BCF: Before contract farming, DCF: During Contract farming.

Tables 5.13 & 5.14 give the average annual income of contract farmers both BCF and ACF by size class. Of the 150 CFs, 131 (87%) reported an average annual income of less than Rs 20,000 per year before contract farming. The average annual income of eight per cent of the total CFs was in the range of Rs 20,000-Rs 30,000. There were only seven CFs whose average annual income was Rs 30,000 and above BCF. It was observed that 10 per cent of the CFs, whose average annual income was less than Rs 20,000, had moved to the next income bracket ACF. Further, the number of CFs whose average annual income was Rs 30,000 and above registered an income of 15 per cent ACF.

**Table 5.13: Average Annual Income (Per HH) Agriculture Before Contract Farming by Size Class**

| Size Class | Average Annual Income BCF (agri) | | | | | | |
|---|---|---|---|---|---|---|---|
| | <20000 | 20001 to 30000 | 30001 to 40000 | 40001 to 50000 | 50001 to 60000 | 60001 & above | Total |
| Marginal | 36 | | 1 | - | - | - | 37 |
| % | 97.3 | | 2.7 | - | - | - | 100 |
| Small | 37 | 3 | - | - | - | - | 40 |
| %% | 92.5 | 7.5 | - | - | - | - | 100 |
| Medium | 51 | 4 | - | 2 | - | - | 57 |
| % | 89.5 | 7.0 | - | 3.5 | - | - | 100 |
| Large | 7 | 5 | - | 2 | 1 | 1 | 16 |
| % | 43.8 | 31.3 | - | 12.5 | 6.3 | 6.3 | 100 |
| Total | 131 | 12 | 1 | 4 | 1 | 1 | 150 |
| % | 87.3 | 8.0 | .7 | 2.7 | .7 | .7 | 100 |

**Table 5.14: Average Annual Income (per HH) from Agriculture During Contract Farming by Size Class**

| Size Class | Average income during contract farming | | | | | | |
|---|---|---|---|---|---|---|---|
| | <20000 | 20001 to 30000 | 30001 to 40000 | 40001 to 50000 | 50001 to 60000 | 60001 & above | Total |
| Marginal | 34 | 1 | | 1 | | 1 | 37 |
| % | 91.9 | 2.7 | | 2.7 | | 2.7 | 100 |
| Small | 34 | 4 | 1 | 1 | | | 40 |
| % | 85.0 | 10.0 | 2.5 | 2.5 | | | 100 |
| Medium | 43 | 9 | 2 | 1 | 1 | 1 | 57 |
| % | 75.4 | 15.8 | 3.5 | 1.8 | 1.8 | 1.8 | 100 |
| Large | 5 | 3 | 4 | | 1 | 3 | 16 |
| % | 31.3 | 18.8 | 25.0 | | 6.3 | 18.8 | 100 |
| Total | 116 | 17 | 7 | 3 | 2 | 5 | 150 |
| % | 77.3 | 11.3 | 4.7 | 2.0 | 1.3 | 3.3 | 100 |

# CHAPTER 6

# GHERKIN CROP AND ITS INCOME AND EMPLOYMENT GENERATION

In this chapter, an attempt is made to assess the land holding pattern of contract farmers, area under gherkin crop, the package of practices employed for cultivation, as well as income and employment generation aspects.

Table 6.1 indicates the land holding pattern of CFs by size class. The average land holding of a CF is 4.78 acres, of which dry land and irrigated land holdings account for 2.32 acres and 2.46 acres respectively. It is clear from Table 6.1 that on an average, the extent of irrigated land of CFs is higher than that of dry land. All the CFs identified by the five companies fulfil one or the other of the conditions for being selected as CF in the study area. It is interesting to note that, across all sizes of holdings, the extent of irrigated land is higher than that of dry land in the case of small and marginal farmers, while it is quite the opposite in the case of medium and large holdings.

**Table 6.1: Total and Average Land Holdings by Size Class**

| Size Class | | Dry land | Irrigated land | Total land |
|---|---|---|---|---|
| Marginal | Sum | 19.38 | 46.00 | 65.38 |
| | Mean | .5238 | 1.2432 | 1.7670 |
| Small | Sum | 40.50 | 88.00 | 128.50 |
| | Mean | 1.0125 | 2.2000 | 3.2125 |
| Medium | Sum | 194.50 | 149.00 | 343.50 |
| | Mean | 3.4123 | 2.6140 | 6.0263 |
| Large | Sum | 93.00 | 86.00 | 179.00 |
| | Mean | 5.8125 | 5.3750 | 11.1875 |
| Total | Sum | 347.38 | 369.00 | 716.38 |
| | Mean | 2.3159 | 2.4600 | 4.7759 |

Land holding pattern of CFs by caste and size class is given in Tables 6.2 & 6.3. It is observed that among social groups the average size of holdings owned by backward castes in both dry land and irrigated land had an edge over the land holdings of SC/STs in the study area. This is a historical phenomenon that exists in rural India. It is clear from the Table 3 that the selected companies were not concerned with the caste of the CF; rather the primary requisite of the CF is to have irrigated land. A representation of SC/STs land holdings exists among all sizes of holdings except in the large holding category because the size of SC/STs land holdings does not exceed 10

acres in the study area. Under the small farmers category, the average size of irrigated lands among SC/STs rank higher than backward castes.

**Table 6.2: Land Holdings by Social Groups**

| Social Group | | Dry land | Irrigated land | Total land |
|---|---|---|---|---|
| BC | Sum | 328.38 | 346.00 | 674.38 |
| | Mean | 2.4506 | 2.5821 | 5.0327 |
| SC & ST | Sum | 19.00 | 23.00 | 42.00 |
| | Mean | 1.1875 | 1.4375 | 2.6250 |
| Total | Sum | 347.38 | 369.00 | 716.38 |
| | Mean | 2.3159 | 2.4600 | 4.7759 |

**Table 6.3: Land Holdings by Size Class and Social Groups**

| Size Class | Social Group | | Dry land | Irrigated land | Total land |
|---|---|---|---|---|---|
| Marginal | BC | Sum | 14.38 | 32.50 | 46.88 |
| | | Mean | .5752 | 1.3000 | 1.8752 |
| | SC & ST | Sum | 5.00 | 13.50 | 18.50 |
| | | Mean | .4167 | 1.1250 | 1.5417 |
| | Total | Sum | 19.38 | 46.00 | 65.38 |
| | | Mean | .5238 | 1.2432 | 1.7670 |
| Small | BC | Sum | 40.50 | 84.00 | 124.50 |
| | | Mean | 1.0385 | 2.1538 | 3.1923 |
| | SC & ST | Sum | .00 | 4.00 | 4.00 |
| | | Mean | .0000 | 4.0000 | 4.0000 |
| | Total | Sum | 40.50 | 88.00 | 128.50 |
| | | Mean | 1.0125 | 2.2000 | 3.2125 |
| Medium | BC | Sum | 180.50 | 143.50 | 324.00 |
| | | Mean | 3.3426 | 2.6574 | 6.0000 |
| | SC & ST | Sum | 14.00 | 5.50 | 19.50 |
| | | Mean | 4.6667 | 1.8333 | 6.5000 |
| | Total | Sum | 194.50 | 149.00 | 343.50 |
| | | Mean | 3.4123 | 2.6140 | 6.0263 |
| Large | BC | Sum | 93.00 | 86.00 | 179.00 |
| | | Mean | 5.8125 | 5.3750 | 11.1875 |
| | Total | Sum | 93.00 | 86.00 | 179.00 |
| | | Mean | 5.8125 | 5.3750 | 11.1875 |
| Grand Total | BC | Sum | 328.38 | 346.00 | 674.38 |
| | | Mean | 2.4506 | 2.5821 | 5.0327 |
| | SC & ST | Sum | 19.00 | 23.00 | 42.00 |
| | | Mean | 1.1875 | 1.4375 | 2.6250 |
| | Total | Sum | 347.38 | 369.00 | 716.38 |
| | | Mean | 2.3159 | 2.4600 | 4.7759 |

Table 6.4 shows the area under different crops by size class. There are nine major crops cultivated in an area of 781.75 acres, of which ragi and coconut plantations account for 30 per cent and 23 per cent respectively. Gherkin comes third with 19 per

cent. Among other crops, the major crops are areca nut (23 per cent) and groundnut (11 per cent) grown by CFs in the study area. It is interesting to note that 36 per cent and 24 per cent of the cropped area respectively account for marginal and small farmers across all sizes of holding. The area under gherkin owned by the medium and large farmers category account for 15 per cent and 11 per cent respectively of the selected CFs.

**Table 6.4: Area under different crops cultivated by CFs and Size Class**

| Sl.No | Crop | Marginal Farmer | Small Farmer | Medium Farmer | Large Farmer | Total |
|---|---|---|---|---|---|---|
| 1 | Gherkin C 1 | 19.00 | 21.50 | 29.75 | 10.50 | 80.75 |
| 2 | Gherkin C2 | 14.00 | 15.50 | 25.00 | 9.50 | 64.00 |
| | Sub-Total | 33.00 (36) | 37.00 (24) | 54.75 (15) | 20.00 (11) | 144.75 (19) |
| 3 | Ragi | 18.00 (20) | 36.00 (24) | 116.00 (33) | 63.00 (350 | 233.00 (30) |
| 4 | Groundnut | 3.50 (4) | 2.00 (1) | 59.00 (17) | 22.00 (12) | 86.50 (11) |
| 5 | Sunflower | - | - | - | 1.00 (1) | 1.00 (neg) |
| 6 | Paddy | 1.00 (1) | - | - | - | 1.00 (neg) |
| 7 | Coconut Garden | 16.u0 (18) | 44.25 (29) | 74.00 (21) | 44.00 (24) | 178.75 (23) |
| 8 | Areca nut | 11.00 (12) | 17.25 (11) | 48.00 (13) | 30.00 (16) | 106.25 (13) |
| 9 | Vegetables | 8.50 (9) | 12.00 (3) | 5.00 (1) | 1.00 (1) | 26.50 (3) |
| 10 | Banana | - | 4.00 (3) | - | - | 4.00 (1) |
| | Total | 91.50 (100) | 152.50 (100) | 356.75 (100) | 181.00 (100) | 781.75 (100) |

Note: Figures in bracket denote percentage to total

Tables 6.5 & 6.6 gives details of the number of CFs and the area under gherkin by size class. Of the 150 CFs, over 87 per cent of the total gherkin crop 1 and 2 cultivated in an area of 0.50 acre and rest in the area of 0.75 acre and 1 acre. Out of 128 CFs, around 55 per cent of them cultivated 0.50 acre of gherkin by small and marginal farmers, and medium and large farmers constitute 35 per cent. The proportion of CFs who cultivate gherkin crop 1 and 2 under 0.50 acre across the sizes of holdings is almost the same. Whereas, medium and large farmers cultivate gherkin crop 1 & 2 under the area of 0.75 acre and 1 acre. The total area under gherkin crop 1 & 2 accounts for 80.75 acres and 64 acres by the CFs. Gherkin crop 1 is grown in Khariff

season and crop 2 during summer (Table 6.6). The total area i.e., 80.75 acres under gherkin crop 1, is equally shared by small and marginal farmers and medium and large farmers in the study area. Whereas, the second crop under gherkin accounts for higher (56 per cent) in the case of the latter size of holdings. On an average, gherkin area cultivated by CFs is 0.50 acre.

**Table 6.5: Gherkin Crop Area (Acre) Cultivated by Size Class**

| Size Class | Gherkin Crop 1 | | Gherkin Crop 2 | |
|---|---|---|---|---|
| | No. of CFs | Area | No. of CFs | Area |
| Marginal | 37<br>(25) | 19.00<br>(23) | 28<br>(24) | 14.00<br>(22) |
| Small | 40<br>(28) | 21.50<br>(27) | 30<br>(25) | 15.50<br>(24) |
| Medium | 53<br>(36) | 29.75<br>(37) | 45<br>(38) | 25.00<br>(39) |
| Large | 16<br>(11) | 10.50<br>(13) | 15<br>(13) | 9.50<br>(15) |
| Total | 146<br>(100) | 80.75<br>(100) | 118<br>(100) | 64.00<br>(100) |

**Table 6.6: Number of CFs and Area of Gherkin Crop Cultivated by Size Class in the Study Area**

| Size Class | .50 Acre | | .75 Acre | | 1.00 Acre | | Total | |
|---|---|---|---|---|---|---|---|---|
| | C 1 | C2 | C 1 | C2 | C 1 | C2 | C 1 | C2 |
| Marginal | 36<br>(28) | 28<br>(27) | - | - | 1<br>(8) | - | 37<br>(25) | 28<br>(24) |
| Small | 37<br>(29) | 29<br>(28) | - | - | 3<br>(23) | 1<br>(17) | 40<br>(28) | 30<br>(25) |
| Medium | 45<br>(35) | 36<br>(35) | 3<br>(60) | 7<br>(78) | 5<br>(38) | 2<br>(33) | 53<br>(36) | 45<br>(38) |
| Large | 10<br>(8) | 10<br>(10) | 2<br>(40) | 2<br>(22) | 4<br>(31) | 3<br>(50) | 16<br>(11) | 15<br>(13) |
| Total | 128<br>(100) | 103<br>(100) | 5<br>(100) | 9<br>(100) | 13<br>(100) | 6<br>(100) | 146<br>100) | 118<br>(100) |

Table 6.7 gives the break-up of the cost of cultivation per acre of gherkin. To cultivate one acre of gherkin, the gross cost comes to Rs 26,500, of which 48 per cent is spent on harvesting of the produce. The other major cost components are fertilisers (16 oer cent); seeds (11 per cent); farm yard manure (5 per cent); and pesticides (4 per cent) (see appendix 2). Establishment costs like staking and G I wire, jute thread

and plastic thread account for 10 per cent of the gross cost. Across the size of holdings, cost components do not show much variation. The gross and net returns approximately are Rs 47,000 and Rs 20,000 respectively. The average yield of gherkins per acre is 6,300 kgs.

Table 6.8 gives details of the gross cost (per acre) of the selected crops in the study area. It is interesting to note that the gross cost of gherkin is the highest at Rs 26,500, followed by sunflower at Rs 8,000, groundnut at Rs 7,687, vegetables crops at Rs 6,000 and garden crops like coconut at Rs 4,000 and areca nut at Rs 3,000. The lowest in gross cost is ragi at Rs 1,700.

**Table 6.7: Cost of Cultivation (Per Acre) of Gherkin crop in the Study Area**

| Sl.No | Particular | Marginal Farmer | Small Farmer | Medium Farmer | Large Farmer | Total |
|---|---|---|---|---|---|---|
| 1 | Land Development | 750 | 800 | 900 | 1000 | 852 |
| 2 | Farm Yard Manure | 1300 | 1250 | 1400 | 1450 | 1350 |
| 3 | Seeds | 3000 | 3000 | 3000 | 3000 | 3000 |
| 4 | Sowing | 200 | 200 | 200 | 200 | 200 |
| 5 | Fertiliser | 4194 | 4236 | 4250 | 4585 | 4150 |
| 6 | Weeding | 500 | 550 | 600 | 800 | 620 |
| 7 | Staking / GI Wire | 718 | 666 | 684 | 630 | 678 |
| 8 | Jute thread | 1126 | 1117 | 1200 | 1200 | 1150 |
| 9 | Plastic thread | 595 | 583 | 591 | 533 | 582 |
| 10 | Pesticides | 1000 | 940 | 938 | 909 | 947 |
| 11 | Irrigation | 400 | 400 | 400 | 400 | 400 |
| 12 | Harvesting | 12400 | 12650 | 12800 | 13000 | 12680 |
| 13 | Gross Cost | 26183 | 26392 | 26963 | 27707 | 26309 |
| 14 | Gross Returns | 46228 | 46526 | 47558 | 47723 | 46992 |
| 15 | Net Returns | 20045 | 20134 | 20595 | 20016 | 20683 |
| 16 | Output (Kgs) | 5963 | 6423 | 6339 | 6505 | 6295 |

**Table 6.8: Gross Cost (Per Acre) of the Selected Crops**

| Sl. No. | Crop | Marginal Farmer | Small Farmer | Medium Farmer | Large Farmer | Total |
|---|---|---|---|---|---|---|
| 1 | Gherkin | 26183 | 26392 | 26963 | 27707 | 26309 |
| 2 | Ragi | 1925 | 1945 | 1727 | 1439 | 1698 |
| 3 | Groundnut | 3171 | 2950 | 2655 | 26733 | 2687 |
| 4 | Sunflower | - | - | - | 8200 | 8200 |
| 5 | Paddy | 4000 | - | - | - | 4000 |
| 6 | Coconut Garden | 3667 | 3816 | 4292 | 3555 | 3938 |
| 7 | Areca nut | 3818 | 3513 | 2673 | 2850 | 2978 |
| 8 | Vegetables | 5894 | 5708 | 6480 | 6100 | 5928 |

The gross returns of the selected crops per acre are indicated in Table 6.9. gherkin ranks first, followed by sunflower, garden crops like coconut, vegetable crops, areca nut, paddy, groundnut and ragi. Similar trends are found with regard to net returns of the other selected crops in the study area (Table 6.10).

**Table 6.9: Gross Returns (Per Acre) of the Selected Crops**

| Sl. No. | Crop | Marginal Farmer | Small Farmer | Medium Farmer | Large Farmer | Total |
|---|---|---|---|---|---|---|
| 1 | Gherkin | 46228 | 46526 | 47558 | 47723 | 46992 |
| 2 | Ragi | 3092 | 3497 | 3370 | 2739 | 3197 |
| 3 | Groundnut | 5228 | 5400 | 4593 | 4136 | 4521 |
| 4 | Sunflower | - | - | - | 17200 | 17200 |
| 5 | Paddy | 7000 | - | - | - | 7000 |
| 6 | Coconut Garden | 14133 | 13220 | 12770 | 10682 | 12493 |
| 7 | Areca nut | 10000 | 10435 | 8896 | 8417 | 9437 |
| 8 | Vegetables | 10588 | 12083 | 12000 | 10000 | 11509 |

**Table 6.10: Net Returns (Per Acre) of the Selected Crops**

| Sl. No. | Crop | Marginal Farmer | Small Farmer | Medium Farmer | Large Farmer | Total |
|---|---|---|---|---|---|---|
| 1 | Gherkin | 20045 | 20134 | 20595 | 20016 | 20683 |
| 2 | Ragi | 1167 | 1551 | 1643 | 1300 | 1498 |
| 3 | Groundnut | 2057 | 2450 | 1938 | 1463 | 1834 |
| 4 | Sunflower | - | - | - | 9000 | 9000 |
| 5 | Paddy | 7000 | - | - | - | 7000 |
| 6 | Coconut Garden | 10466 | 9404 | 8478 | 7127 | 8555 |
| 7 | Areca nut | 6182 | 6922 | 6223 | 5567 | 6459 |
| 8 | Vegetables | 4694 | 6375 | 5520 | 3900 | 5581 |

Regarding output kgs/per acre of the selected crops, gherkin comes first, followed by groundnut and garden crops like coconut and areca nut, paddy, sunflower and ragi (Table 6.11).

**Table 6.11: Output (Kgs/Per Acre) of the Selected Crops**

| Sl. No. | Crop | Marginal Farmer | Small Farmer | Medium Farmer | Large Farmer | Total |
|---|---|---|---|---|---|---|
| 1 | Gherkin | 5963 | 6423 | 6339 | 6505 | 6295 |
| 2 | Ragi | 522 | 517 | 495 | 427 | 482 |
| 3 | Groundnut | 314 | 400 | 300 | 236 | 273 |
| 4 | Sunflower | - | - | - | 800 | 800 |
| 5 | Paddy | 1000 | - | - | - | 1000 |
| 6 | Coconut Garden | 2406 | 2395 | 2243 | 1932 | 2219 |
| 7 | Areca nut | 218 | 339 | 299 | 351 | 312 |

Details of harvest days of gherkin as reported by CFs by size class are given in Table 6.12. A large number of CFs, i.e., 103 CFs out of 146 sample households, reported that the harvesting period ranges from 41 to 60 days, whereas, 28 per cent of the CFs reported to have harvested gherkins for 20 to 40 days.

**Table 6.12: Employment Generation during Harvest of Gherkin Crop**

| Size Class | Number of days of Harvest | | | |
|---|---|---|---|---|
| | 20 to 40 | 41 to 60 | 61 & above | Total |
| Marginal | 9 (24) | 27 (73) | 1 (3) | 37 (100) |
| Small | 8 (20) | 32 (80) | - - | 40 (100) |
| Medium | 19 (36) | 33 (62) | 1 (2) | 53 (100) |
| Large | 5 (31) | 11 (69) | - - | 16 (100) |
| Total | 41 (28) | 103 (71) | 2 (1) | 146 (100) |

The prevailing wage rates for hired labourers gender-wise is given in Table 6.13. The wage rate for both the crop 1 and 2 is around Rs 40 for male and Rs 30 for female labourers in the study area.

**Table 6.13: Prevailing Wage Rates by Sex-wise in the Study Area**

| Size Class | CROP 1 HIRED | | CROP 2 HIRED | |
|---|---|---|---|---|
| | M | F | M | F |
| Marginal | 43 | 30 | 42 | 30 |
| Small | 43 | 30 | 43 | 30 |
| Medium | 39 | 30 | 42 | 30 |
| Large | 40 | 30 | 42 | 30 |
| Total | 41 | 30 | 42 | 30 |

Details of the total labour cost incurred on harvesting gherkin (1 and 2) are given in Table 6.14. On an average, the total labour cost incurred to harvest crop 1 and 2 was found to be Rs 8,694 and Rs 7,050, respectively.

**Table 6.14: Total Labour Cost for Harvest of Gherkin Crop 1 and 2**

| Size Class | CROP 1 | CROP 2 |
|---|---|---|
| Marginal | 7554 | 5856 |
| Small | 9155 | 7244 |
| Medium | 8599 | 7091 |
| Large | 10486 | 8890 |
| Total | 8694 | 7050 |

The Contract Price per/Kg of gherkins by grades is fixed at the time of contract between the company and the farmer (Table 6.15). On an average, the contract price for grade 1 is Rs 10; grade 2 Rs 6; and grade 3 Rs 3. Contract prices are almost uniform with all the selected companies in the study area.

**Table 6.15: Contract Price (Per/Kg) of Gherkins**

| Size Class | CROP 1 | | | CROP 2 | | |
|---|---|---|---|---|---|---|
| | Grade 1 | Grade 2 | Grade 3 | Grade 1 | Grade 2 | Grade 3 |
| Marginal | 10 | 6 | 3 | 10 | 6 | 3 |
| Small | 10 | 6 | 3 | 10 | 6 | 3 |
| Medium | 10 | 6 | 3 | 10 | 6 | 3 |
| Large | 10 | 6 | 3 | 10 | 6 | 3 |
| Total | 10 | 6 | 3 | 10 | 6 | 3 |

Tables 6.16 & 6.17 give details of the output of gherkin by crops, grades and size classes. The average output of gherkins for crop 1 and 2 are 3,434 kgs and 2,594 kgs, respectively. The gross returns for crop 1 and 2 are Rs 25,668 and Rs 18,423 respectively. The output for grade 1 accounts for 53 per cent of the total output for crop 1 (Table 6.17); and for grade 2 and 3, 33 per cent and 14 per cent respectively.

**Table 6.16: Output of Gherkins per Acre by Crop and Size Class**

| Size Class | CROP 1 | | CROP 2 | |
|---|---|---|---|---|
| | Qty Kgs | Value (Rs) | Qty Kgs | Value (Rs) |
| Marginal | 3060 | 23782 | 2195 | 15550 |
| Small | 3609 | 26300 | 2258 | 16344 |
| Medium | 3316 | 24879 | 2677 | 19268 |
| Large | 4282 | 31256 | 4063 | 27257 |
| Total | 3434 | 25668 | 2594 | 18423 |

**Table 6.17: Output of Gherkins per acre by Grades and Size Class**

| Grades | Number of Gherkins | |
|---|---|---|
| | CROP 1 | CROP 2 |
| Grade 1 | 1802 | 1385 |
| Grade 2 | 1130 | 922 |
| Grade 3 | 501 | 287 |
| Total | 3433 | 2594 |

Details of the live-stock population and income derived from it by size class are presented in Table 6.18. The net income derived from live-stock of all the size of holdings comes to Rs 2,646 per household. The live-stock population as also the net income derived directly from it is proportionate to the size of holdings.

The contract document between the company and the CF is in three formats, i.e., Kannada, English and both (see appendix 3). About 80 per cent of the CFs reported having signed the CD in Kannada, five per cent in English only and 15 per cent in both English and Kannada (Table 6.19)

**Table 6.18 : Live stock population and Income Derived by Size Class**

| Size Class | Number of Livestock | Value of Animal Invest-ment | Number of Member Involved | Income Derived | Value of Bye-product | Family Labour | Feeds | Total Cost | Net Income Derived |
|---|---|---|---|---|---|---|---|---|---|
| Marginal | 1 | 7783 | 1 | 4445 | 1243 | 459 | 2432 | 2905 | 1540 |
| Small | 2 | 11175 | 1 | 6750 | 1750 | 850 | 3450 | 4300 | 2450 |
| Medium | 3 | 12298 | 1 | 7736 | 2324 | 903 | 3982 | 4903 | 2798 |
| Large | 4 | 20562 | 1 | 13062 | 3375 | 1594 | 6313 | 7906 | 5156 |
| Total | 2 | 11767 | 1 | 7230 | 2017 | 853 | 3707 | 4570 | 2646 |

**Table 6.19: Contract Document in Kannada/English or Both**

| Size Class | Kannada | English | Both | Total |
|---|---|---|---|---|
| Marginal | 28 | 5 | 4 | 37 |
| | 75.70% | 13.50% | 10.80% | 100.00% |
| Small | 33 | 2 | 5 | 40 |
| | 82.50% | 5.00% | 12.50% | 100.00% |
| Medium | 46 | - | 11 | 57 |
| | 80.70% | - | 19.30% | 100.00% |
| Large | 13 | - | 3 | 16 |
| | 81.30% | - | 18.80% | 100.00% |
| Total | 120 | 7 | 23 | 150 |
| | 80.00% | 4.70% | 15.30% | 100.00% |

Table 6.20 indicates the number of years CFs have been growing gherkin in the study area. A large number of CFs, i.e., 73 per cent, reported that they have been cultivating gherkin for one year, while 25 per cent of the CFs have been into it for form two years.

The Field Inspection Report (see appendix 4) and the frequency of field visits (see appendix 5) by the company's field staff by size class is given in Table 6.21 (see appendix 4 & 5). Around 82 per cent of the CFs reported that field staff visited them twice a week, 11 per cent said once in two days and seven per cent once a week.

**Table 6.20: The Number of Years Growing Gherkin**

| Size Class | No. of Years Growing Gherkins | | | | |
|---|---|---|---|---|---|
| | 1 year | 2 years | 3 years | More than 3 years | Total |
| Marginal | 26 | 10 | 1 | - | 37 |
| | 70.30% | 27.00% | 2.70% | - | 100.00% |
| Small | 30 | 10 | - | - | 40 |
| | 75.00% | 25.00% | - | - | 100.00% |
| Medium | 42 | 14 | - | 1 | 57 |
| | 73.70% | 24.60% | - | 1.80% | 100.00% |
| Large | 11 | 4 | - | 1 | 16 |
| | 68.80% | 25.00% | - | 6.30% | 100.00% |
| Total | 109 | 38 | 1 | 2 | 150 |
| | 72.70% | 25.30% | 0.70% | 1.30% | 100.00% |

**Table 6.21: Frequency of Visits by the Field Staff**

| Size Class | Frequency of Visits | | | |
|---|---|---|---|---|
| | Once in two days | Weekly twice | Weekly once | Total |
| Marginal | 6 | 30 | 1 | 37 |
| | 16.20% | 81.10% | 2.70% | 100.00% |
| Small | 4 | 36 | - | 40 |
| | 10.00% | 90.00% | - | 100.00% |
| Medium | 5 | 44 | 8 | 57 |
| | 8.80% | 77.20% | 14.00% | 100.00% |
| Large | 1 | 13 | 2 | 16 |
| | 6.30% | 81.30% | 12.50% | 100.00% |
| Total | 16 | 123 | 11 | 150 |
| | 10.70% | 82.00% | 7.30% | 100.00% |

The availability and utilisation pattern of services provided by companies is given in Table 6.22. The services provided by companies such as transport (lifting gherkins from the field), training facilities (dissemination of knowledge on the package of practices), technical support, and their utilisation by CFs, were found to be totally satisfactory (Table 6.23).

**Table 6.22: Availability & Utilisation of Services for the Produce**

| Services | Quality Criteria | Marginal | | Small | | Medium | | Large | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No |
| Trans-port | Available | * | - | * | - | * | - | * | - | * | - |
| | Utilised | * | - | * | - | * | - | * | - | * | - |
| Accounts/Audits | Available | * | - | * | - | * | - | * | - | * | - |
| | Utilised | * | - | * | - | * | - | * | - | * | - |
| Tech-nical Support | Avail-able | * | - | 97 | 3 | 95 | 5 | 94 | 6 | 97 | 3 |
| | Utilised | 97 | 3 | 97 | 3 | 90 | 10 | * | - | 95 | 5 |
| Market Access | Available | - | - | - | - | - | - | - | - | - | - |
| | Utilised | - | - | - | - | - | - | - | - | - | - |
| Training | Available | * | - | * | - | * | - | * | - | * | - |
| | Utilised | * | - | * | - | * | - | * | - | * | - |

* Denote 100 per cent

Table 6.24 furnishes details of the contract between the company and the primary producer. Awareness about the contract document (CD), the format of the CD (see appendix 4), signing the CD, (signing both for one year and longer), knowledge about pesticides, adoption of precautionary measures, frequency etc. of vehicles lifting gherkins from the field as also field visits by the field staff etc. were found to be perfect. Whereas, 65 per cent of CFs reported that did not have a copy of the CD with them. The selected companies used to charge three per cent of the gross as transport cost. Further, the company would not purchase the entire produce when the size of gherkins did not conform to the norms prescribed in the CD.

**Table 6.23: Services are Available for Primary Producers**

| Services | Quality Criteria | Marginal | | Small | | Medium | | Large | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | V G | G | V G | G | V G | G | V G | G | V G | G |
| Trans-port | Availability | 100 | - | 100 | - | 100 | - | 100 | - | 100 | - |
| | Accessibility | 92 | 8 | 95 | 5 | 84 | 16 | 81 | 19 | 89 | 11 |
| | Cost of Service (%) | - | 3 | - | 3 | - | 3 | - | 3 | - | 3 |
| | Quality of Service | 100 | - | 100 | - | 100 | - | 100 | - | 100 | - |
| Accounts /Audits | Availability | 100 | - | 100 | - | 100 | - | 100 | - | 100 | - |
| | Accessibility | 100 | - | 100 | - | 100 | - | 100 | - | 100 | - |
| | Cost of Service | - | - | - | - | - | - | - | - | - | - |
| | Quality of Service | - | 100 | - | 100 | - | 100 | - | 100 | - | 100 |
| Techni-cal Support (Mainten ance etc) | Availability | 100 | - | 97 | 3 | 88 | 12 | 100 | - | 95 | 5 |
| | Accessibility | 100 | - | 100 | - | 91 | 9 | 100 | - | 97 | 3 |
| | Cost of Service | - | - | - | - | - | - | - | - | - | - |
| | Quality of Service | 100 | - | 100 | - | 100 | - | 100 | - | 100 | - |
| Market Access (Link-ages) | Availability | - | - | - | - | - | - | - | - | - | - |
| | Accessibility | - | - | - | - | - | - | - | - | - | - |
| | Cost of Service | - | - | - | - | - | - | - | - | - | - |
| | Quality of Service | - | - | - | - | - | - | - | - | - | - |
| Training | Availability | 100 | - | 100 | - | 100 | - | 100 | - | 100 | - |
| | Accessibility | - | 100 | - | 100 | - | 100 | - | 100 | - | 100 |
| | Cost of Service | - | - | - | - | - | - | - | - | - | - |
| | Quality of Service | - | 100 | - | 100 | - | 100 | - | 100 | - | 100 |

**Table 6.24: Details About the Contract in the Study Area**

| Sl. No. | Particulars | Marginal | | Small | | Medium | | Large | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No |
| 1 | Contract Document Written | 100 | - | 100 | - | 100 | - | 100 | - | 100 | - |
| 2 | Aware of C D | 100 | - | 100 | - | 100 | - | 100 | - | 100 | - |
| 3 | Sign the C D | 100 | - | 100 | - | 100 | - | 100 | - | 100 | - |
| 4 | Sign C D for 1 Year | 100 | - | 100 | - | 100 | - | 100 | - | 100 | - |
| 5 | Do you have C D | 35 | 65 | 40 | 60 | 30 | 70 | 44 | 56 | 35 | 65 |
| 6 | Aware of Pesticides | 100 | - | 100 | - | 100 | - | 100 | - | 100 | - |
| 7 | Problems faced Spraying Pesticides | - | 100 | - | 100 | 2 | 98 | - | 100 | 1 | 99 |
| 8 | Precautionary Measures | 100 | - | 100 | - | 100 | - | 100 | - | 100 | - |
| 9 | Vehicles Pick the Produce | 100 | - | 100 | - | 100 | - | 100 | - | 100 | - |
| 10 | Transport Charges | 100 | - | 100 | - | 100 | - | 100 | - | 100 | - |
| 11 | Aware of Market Price | - | 100 | - | 100 | - | 100 | - | 100 | - | 100 |
| 12 | Domestic Consumption | - | 100 | - | 100 | - | 100 | - | 100 | - | 100 |
| 13 | Field Staff – Visits | 100 | - | 100 | - | 100 | - | 100 | - | 100 | - |
| 14 | Co. Purchases entire Produce | 89 | 11 | 95 | 5 | 84 | 16 | 81 | 19 | 88 | 22 |

# CHAPTER 7

# BENEFITS FROM GHERKIN AND PERCEPTIONS OF CONTRACT FARMERS

This chapter attempts to assess the benefits accrued from the cultivation of gherkin, besides the contract farmers' perceptions about sustainability of the crop in the study area.

**Benefits for Contract Farmers:**

The following are the benefits derived by contract farmers in Karnataka.

1. Gherkin crop is grown throughout the year (all seasons).

2. The crop keeps farmers engaged throughout the year by attending to the crop in the field.

3. It provides employment opportunities to the family members of both land holders and landless labourers in rural areas.

4. Gherkin can be cultivated in the temperate climatic conditions prevalent in the districts of Tumkur, Bellary, Hassan, Davanagere, Chitradurga, Kolar, etc.

5. Pre-fixed prices for the crop largely eliminate risks from the gherkin growing community.

6. Companies provide all inputs like seeds, fertilisers, pesticides, and a package of practices (except staking materials (sticks), jute thread and plastic thread) to contract farmers.

7. The income generated from this crop could be used to repay loans borrowed from different sources.

8. Gherkin consumes less water for irrigation, i.e. one and a half inch size pumped water is sufficient to irrigate one acre.

9. Commission agents and/or middlemen are excluded as companies themselves act as facilitators for transport and marketing of the produce.

10. There is a transparent and fool-proof weighing and accounting system. Buyers weigh gherkins in front of the farmers according to grade/s and enter the quantity into the passbook, maintained by the CF.

11. Farmers get timely technical guidance from the company's field officer/s to prevent the spread of diseases/pests from crops grown in plots adjoining the area where gherkin is grown.

12. This being a short duration crop (three months), harvesting begins after 28 to 30 days and closes between 70 and 80 days, depending on the standard of crop husbandry.

13. Gherkin is eminently suitable for marginal and small holdings because such households generally have members who can help in daily farm activities. Smaller holdings with assured irrigation seems to be ideal for growing gherkin.

14. Gherkin cultivation can be taken up with low investment per acre – Rs 12,000 to Rs 15,000. This is so because companies provide all necessary inputs, except staking. Labour costs are also minimised by pooling in family labourers and avoiding paid out cost (for hired labourers).

15. In conventional farming farmers get returns under gherkin cultivation, farms (CFs) get regular income fortnightly, which helps them meet recurring expenditure for other crops as also to meet domestic expenditure.

16. It is a profitable crop and also economically viable. Compared with other commercial crops, Gherkin generates more income and employment within a short gestation period. Returns to investment in percentage terms are higher than any other comparable crop.

**Perceptions of Contract Farmers:**

1. Companies should extend credit facilities also to gherkin farmers.

2. Minimum Support Price (MSP) should be fixed for various grades of gherkins, through legislation by Government.

3. Companies can introduce other crops under the contract farming system, if found feasible.

4. Provisions should be made to purchase all grades of gherkins other than those specifically notified in the contract agreement.

5. Uniformity needs to be maintained in extending facilities/ inputs like medicine kit (to preserve pesticides), GI wire, jute thread, plastic thread, sprayer and spraying dress (to prevent health hazards).

6. Stipulate uniformity in grades of gherkins to be grown, in order to help farmers to gather expertise in their given segments.

7. As per the contract agreement, the disbursement of money was fortnightly. At times it was found to exceed that duration (field evidences show that one of the firms did not make a single payment despite the crop harvest having been over, the reason being that the company was a constructing new building).

8. In case of any lapses from the companies, the Government should intervene and come to the rescue of farmers.

9. Promotion of domestic consumption of gherkins will definitely come to the rescue of farmers in the event of a fall in price or demand in the international market.

10. NABARD should evolve a collateral security system between the corporate bodies involved in contract farming and farmers.

11. Fertiliser subsidies should be extended to corporate bodies in order to help the contract farmers to avail fertiliser at affordable prices.

12. Motivating private insurance companies to participate in the contract farming sector may be considered to act as a liaison authority between corporate bodies and contract farmers in the form of a Crop Insurance Scheme, both as a facilitator and guarantor in the event of crop failure. This would also address the problem of natural calamities like droughts or floods that wipe out gherkin crops.

13. The introduction of the Drip Irrigation Programme among contract farmers with suitable subsidies.

14. Agents other than established corporate bodies involved in Contract Farming need be discouraged. Such agents often cheat farmers by not making payment and also by not lifting the whole produce.

15. Prices fixed under a contract needs upward revision corresponding with grades of the produce.

16. Government should, on a trail basis, enter into CFs, particularly in crops/areas where distress sale of agricultural produce is often reported.

17. In the initial stages of the crop, visits by field staff found to be regular; as the crop advances the frequency of visits comes down. It was also observed that the field staff rarely, or in some cases never, visit fields of experienced farmers. Assured timely visits by the field staff would strengthen the expertise of farmers both experienced and fresher, and thereby, ensure uniform high levels of gherkin fields.

18. Gherkin needs heavy dosages of pesticides (as part of the prescribed package of practices), and regular spraying. Farmers handling pesticides for longer periods are prone to various afflictions, and it would be a great help to farmers if the companies come forward with health insurance schemes to cover vulnerable farmers.

# CHAPTER - 8
# CONCLUSIONS AND POLICY OPTIONS

**Introduction:**

With the emergence of the free market economy in the wake of liberalisation. globalisation, privatisation and the fast expansion of agri-business , small farmers may find it difficult to cope up with the resultant volatility in the economy. They tend to be marginalised and migration from rural to urban areas is increasing alarmingly all over the country. As a result, consolidation of holdings is increasingly becoming the need of the day. One of the strong reasons could be the lack of well-established forward and backward linkages, such as extension advice, mechanisation services, supply of seeds, fertilisers and credit, as also guaranteed and profitable markets for their produce. Therefore, the need of the hour is to mitigate the difficulties in the contract farming system, which would hopefully popularise it further among small farmers. The agreements between the farmer and the firm provides for the purchaser to extend a degree of production support through inputs and technical guidance for crop cultivation. There is a commitment from the farmer's side to produce the specified agricultural products by conforming to the quality and quantity prescribed by the purchaser, and the firm supports, in turn, the farmer's production, and also purchases the produce.

Contract farming has long-term benefits for both the grower and the purchaser, provided that their long-term association is mutually complementary. A sizable part of the farming community falls under the small and marginal category in India. Contract farming, as it existed then was different from the design and functioning of contract farming method today. Karnataka will shortly emerge as one of the food park centres in the food basket of India. Karnataka has already given an indication of that. Gherkin revolution has brought much needed income to impoverished farmers, many of whom are now lakhpathis. This trend is being replicated in Maharastra and Tamil Nadu. Gherkin is a much sought after delicacy in US and in Europe. Currently Karnataka has a 90 per cent share in India's gherkin exports.

Generally, summer crop is sown during the months of December and early January. Farmers' inputs on raising gherkin seem to be optimal. This could be attributed to the fact that farmers were now free to focus on gherkin alone, after having tried out other crops. Concerned companies in the field also concentrate more on gherkin with less area and lesser farmers. As a result, yields per acre is definitely higher as compared to other crops. Added to this, the environment is also favourable for better yield rates.

**Objectives and Methodology:**

The objectives of the study are: to make an inventory of firms involved in contract farming in Karnataka, the structure of agreement between the primary producer and the firm, the type of crop promotion under contract farming, to assess the impact on income and employment generation for contract farmers and their perceptions on continuation, benefits accrued for both farmers and firms, meeting the demands of both the local and export markets and, finally, to suggest policies for its sustainability.

There are around 25 firms involved in contract farming and promoting gherkin spread over districts of Tumkur, Bellary and Haveri in Karnataka. Tumkur district is purposely selected for the in-depth study. And about 10 firms promote gherkin in the district. Out of these, five leading companies are chosen and 11 villages and 30 contract farmers (CFs) from each company representing the different size of holdings are covered. A structured questionnaire is prepared and 150 CFs interviewed. The reference year for the study is 2002-03.

**Findings:**

- By and large, the selected five companies fix price per kilo of gherkins by grade i.e., first Rs 11 to Rs 10.50; second Rs 7 to Rs 6; third Rs 4 to Rs 2; and lost grade Rs 2 to Re 1. And above companies supply inputs like seeds, fertilisers, pesticides and technical guidance to contract farmers (CFs).

- Of the total 150 CFs selected, small and marginal farmers constitute 52 per cent, medium farmers 38 per cent, and large farmers 10 per cent. Seventy per cent of the heads of households (HH) of CFs are in the age group 26 to 50 years. Over 93

per cent of CFs are married. Almost all CFs (99 per cent) are literate. The average family size of CF was 6.7 persons. Around 70 per cent of the total population in the study area is involved in agriculture. Out of 150 CFs, backward castes and SC/STs form 89 per cent and 11 per cent respectively. Almost all CFs own pucca houses and higher the size of holdings better is the quality of house. The average annual income mobility observed before contract farming and after contract farming is between 10 and 15 per cent, and 10 per cent of CFs crossed above the poverty line in the study area.

- The average land holding of CF is 4.78 acres, of which dry and irrigated land account for 2.32 acres and 2.46 acres respectively. There are nine major crops cultivated, of which ragi and coconut plantation rank first and second, followed by gherkin (19 per cent of the total cultivated area), areca nut and groundnut.

- The area under gherkin ranges between 0.50 acre and 1 acre, and the majority of CFs cultivate gherkin in an area of 0.50 acre to 0.75 acre. To cultivate one acre of gherkin, the gross cost comes to Rs 26,500, of which 48 per cent is spent on harvesting of the produce. Gross returns and net returns account for approximately Rs 47,000 and Rs 20,000 respectively. The average yield of gherkins per acre is 6,300 kgs. Gherkin ranks first in terms of gross and net returns, followed by sunflower, garden crops like coconut, vegetable crops, areca nut, paddy and groundnut, the lowest being ragi. The average number of harvested days of gherkins ranges from 41 to 60 days, and the labour cost ranges from Rs 7,000 to Rs 8,694.

- About 80 per cent of CFs reported to have signed contract documents in Kannada, five per cent in English and 15 per cent in both English and Kannada. Around 73 per cent of CFs have been cultivating gherkin for a year, while 25 per cent have been into it for two years. Eighty two per cent of field staff visits fields twice a week, eleven per cent once in two days and seven per cent once a week. The availability and utilisation pattern of services i.e., the package of practices, input supplies and a buy-back system were found to be totally satisfactory.

- Gherkin is grown throughout the year, consumes less water, keeps CFs engaged in the crop husbandry and also provides employment opportunities to landless rural

labourers. Pre-fixed prices for gherkins largely eliminate the risk to growers, middlemen are totally absent and there is a high level of transparency in terms of weights and measures, accounting and payments.

**Policy Options:**

- Financial institutions should step in to extend credit/loan facilities to CFs, MSP should be fixed for the various grades of gherkins through legislations by the Government.

- Provision should be made to purchase the entire produce. Other inputs like GI wire plastic and jute thread, sprayer and sprayer dress (to prevent health hazards) should be provided. And in the case of any lapse from the companies, the Government should come to the rescue of CFs.

- NABARD should evolve collateral security between the company and contract farmers.

- Existing drip irrigation facilities may be extended with suitable subsidies to the loan amount through the horticulture department.

- Private insurance companies should insure the crop in the event of crop failure or natural calamities.

- The role of NGOs/Vos in closely monitoring CFs and companies in maintaining a cordial relationship, which benefit them mutually.

## Appendix – 1

### Gherkin Promoting Companies in Karnataka

1. Ace Agri-Exports Pvt. Ltd.
2. Bharath Associates
3. Blossom Showers Agro-Export Pvt. Ltd.
4. Blossom Showers Pvt. Ltd.
5. Global Green Co. Ltd.
6. Green Agro Pack Pvt. Ltd.
7. Green Pickles Pvt. Ltd.
8. Ken Agri Tech Pvt. Ltd.
9. Koelman Indian Pvt. Ltd.
10. Southern Garden India Pvt. Ltd.
11. Sterling Agro Products Processing Pvt. Ltd.
12. SMS Foods Technologies Ltd.
13. Indo-Danish Pvt. Ltd.
14. UNICORN Agro-Tech Ltd.
15. Vishal Natural Products Pvt. Ltd.
16. Indo-Spanish Pvt. Ltd.
17. RITZEL (India) Pvt. Ltd.
18. Inter-Garden (India) Pvt. Ltd.
19. Bharathi Agro-Industrial Foundation
20. Calipso Foods Pvt. Ltd.
21. Unillever Best Foods Pvt. Ltd.
22. Neo Foods Pvt. Ltd.
23. Indo-Spanish Tasty Foods Pvt. Ltd.
24. Indian Tropical Food Products Pvt. Ltd.
25. Capricorn Food Products India Pvt. Ltd.

**Appendix – 2**

**Pesticides Spray Schedule for 0.5 Acres (New)**

| Sl. No. | Day | SPV | Pest & Disease | Inputs | Pacing Unit | Units To Issue | Consump-tion Per Round | Bal With Farmer |
|---|---|---|---|---|---|---|---|---|
| | 1 | 0 | Sowing | Ajax Seed | | 4000Nos | 4000 Nos | 0 |
| | | | Basal Fert. Application | D.A.P + M.O.P | | 50 Kg + 25 Kg | | |
| | | | Micronutrient | Soil Micro-nutrients | 10 Kgs | 1 | 10 Kgs | |
| | | | | Grow More | 20 Kgs | 1 | 20 Kgs | |
| 1 | 10 | 35 lit | Insect control | exodus | 100ml | 1 unit | 50 ml | 50 ml |
| | | | Disease control | mancozeb | 100 gms | 1 unit | 100 gms | 0 |
| | | | Micronutrient | nil | nil | nil | nil | Nil |
| | | | Growth promoter | nil | nil | nil | nil | Nil |
| | | | Foliar fert | nil | nil | nil | nil | Nil |
| | | | Fert.Soil application | nil | nil | nil | nil | Nil |
| 2 | 17 | 50lit | Insect control | Azadirectin 10000 ppm | 100ml | 1 unit | 100ml | 0 |
| | | | Disease control | Mancozeb+ | 100gm | 1 unit | 100gm | 0 |
| | | | Disease control | Potta phos | 250ml | 2 units | 150ml | 100ml |
| | | | Micro nutient | nil | nil | nil | nil | Nil |
| | | | Growth promoter | - | - | - | - | - |
| | | | Foliar fert | Nitroplus | 100ml | nil | 100ml | 0 |
| | | | staking | G I Wire | - | 10Kg | - | - |
| 3 | 24 | 100lit | Insect control | Exodus | - | - | - | 0 |
| | | | Disease control | Potas phos+ | 250ml | 1 unit | 300ml | Nil |
| | | | Disease control | Mancozeb+ | 250gms | 1 unit | 250gms | Nil |
| | | | Micro nutrient | nil | nil | nil | nil | Nil |
| | | | Foliar fert | Nitroplus | Nitroplus | 100ml | nil | 100ml |
| | | | Fert. Soil.Appli | Nil | nil | nil | nil | Nil |
| 4 | 31 | 150lit | Insect control | Flee wevil | 500ml | 1 unit | 500ml | 0 |
| | | | Disease control | Cymo+man | nil | nil | nil | nil |
| | | | Micro nutrient | cucumix | 250gms | 2 unit | 500gms | 0 |
| | | | Growth promoter | Daman+ | 10ml | 2 units | 20ml | 0 |
| | | | Foliar fert | Nitoplus | 500gms | 1 unit | 500gms | 325gms |
| | | | Fert soil Applica | CAN+MOP | nil | nil | nil | Nil |
| 5 | 38 | 175lit | Insect control | Dr.Repell | 500ml | 1 unit | 500ml | Nil |
| | | | Disease control | Potas phos+ | 250ml | 2 units | 500ml | 0 |
| | | | Disease control | Mancozeb+ | 250gms | 2 units | 500ml | 0 |
| | | | Micro nutrient | nil | nil | nil | nil | Nil |
| | | | Growth Promoter | - | 100ml | 2 units | 200ml | 0 |
| | | | Fert Soil Applica | CAN+MOP | | 25 KG + 25 KG | | |

Continued.....

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Growth promoter | - | - | - | - | - |
| | | | Foliar fert | Nitroplus | 100ml | nil | 100ml | 0 |
| | | | staking | G I Wire | - | 10Kg | - | - |
| 6 | 45 | 100lit | Insect control | Azadirectin 10000ppm | 200ml | 1 unit | 200gms | 0 |
| | | | Disease control | Potas Phos+ | 100ml | 5 units | 500ml | 0 |
| | | | | Mancizeb+ | 100gms | 5 units | 500gms | 0 |
| | | | Micro nutrient | cucumix | 500gms | 1 unit | 500gms | Nil |
| | | | Growth promoter | Danam+ | 10ml | 3 units | 30ml | Nil |
| | | | Foliar fert | nil | nil | nil | nil | Nil |
| | | | Fert Soil Applica | nil | nil | nil | nil | nil |
| 7 | 52 | 200lit | Insect control | Dr.Repell | 500ml | 1 unit | 500ml | 0 |
| | | | Disease control | Curzate | 100gms | 2 units | 20gms | Nil |
| | | | Micro nutrient | - | 500gms | 1 unit | 500gms | Nil |
| | | | Growth promoter | nil | nil | nil | nil | nil |
| | | | Foliar fert | CA NO3 or | 500gms- | | 250gms | 0 |
| | | | | KNO3 | 500gms | - | 500gms | 0 |
| | | | Fert Soil Applica | nil | nil | nil | nil | Nil |
| 8 | 59 | 200lit | Insect control | Flee wevil | 500ml | 1 unit | 500ml | 0 |
| | | | Disease control | nil | nil | nil | nil | nil |
| | | | Micro nutrient | nil | nil | nil | nil | nil |
| | | | Growth promoter | Daman+ | 10ml | 3 units | 30ml | nil |
| | | | Foliar fert | nil | nil | Nil | nil | nil |
| | | | Fert Soil Applica | nil | nil | Nil | nil | nil |
| 9 | 66 | 250 | | Azadira-chtrin 10000ppm | 300ml | - | - | - |

## Appendix - 3

### Gherkin Contract Production Agreement Copy

---------- residing in the village having---------- acres furnishing the details of cultivating gherkin crop based on agreement prepared with the following conditions and the produce will be supply to Reitzel India (Pvt) Ltd, 63/2, 9 th "A" Cross, 12 th Block, Kumara Park West, Bangalore.

**Both are agreed mutually to the conditions mentioned below**

1. Farmer should cultivate gherkin crop under good irrigation conditions as advised by the agricultural officer of the company.
2. The quantum of pesticides to spray as prescribed by the agricultural officer and should not spray pesticides other than that suggested by the company; such gherkin produce will only be purchased.
3. Farmers are expected to have complete information about crop husbandry, quality of information, harvesting of gherkins, filtering gherkins by grades and technical aspects and adhere to those.
4. Not properly tie the creeper, difference in the harvested gherkins (soiled, bend, white colour, dried, gherkins with flower, virus affected) such items will not be purchased and farmers should grade affected gherkins.
5. Gherkins should not be sold to other than the notified company or in open market. If such situation is found, agreement will be cancelled and the dues from the farmer recovered.
6. Grades and price fluctuation in the International market will be informed to farmers. In the event of strike/s, farmers should cooperate in supplying gherkins to the local office.
7. Out of the total supplied gherkins, three per cent will be deducted towards transportation charges.
8. Fortnightly once on the notified dates payment will be disbursed to farmers.
9. Gherkins grades/ filters and price fixed are as follows.

| Grade | Filter size | No. of Gherkins | Price |
|---|---|---|---|
| RI – A | 14 mm | 160+ | 11.00 |
| RI – B | 20 mm | 60-160 | 6.00 |
| RI - C | >20 mm | -60 | 2.00 |

---------- ----------

Signature of the Farmer

Signature of the concerned Officer from The Company

Name ----------

Father's Name ----------

Village ----------

Taluk ----------

District ----------

Name ----------

Dept/ Section ----------

Date ----------

## Appendix - 4

### Unicorn Agrotech Limited

### Field Inspection Report

No.
Date……..
Farmer;s Name……..
Time of Visit……..

Village……..
A/C. No……..
Dt. Of Sowing……..

**OBSERVATIONS:**

Thrips ……..%
Mites …….. %
Fr. Borer…….. %
Leaf Borer…….. %

D. Mildew……..%
P. Mildew……..%
F. Rot……%
Virus……..%

---

**OTHERS :**

---

Harvest Till Date……Kg. N % P % K %

Balance (Approx)……..Kg.

Stage Health Staking

**Recommendations:**

1) Fertilisers: 1…… 2……
2) Chemicals: 1…… 3……
2…… 4……
3) Others: 1…… 2……

_____ _____
Field Staff Sign Farmer sign

**Appendix - 5**

| REITZEL INDIA | **DAILY FIELD REPORT** | Ref :<br>Version : O<br>Date : |
|---|---|---|

**Name of the Staff :** **Sl. No.** **Area :**
**Designation :** **Date :**

| **Sl. No.** | **Farmer's Name** | **Village** | **Code No.** | **Crop Stage** | **Recommendations**<br>Plant Fertiliser Other Protection, if any | | |
|---|---|---|---|---|---|---|---|
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