

Agro-Economic Policy Briefs

Aiding the Future of India's Farmers and Agriculture



For kind attention of:

The Hon'ble Prime Minister's Office,
the Ministry of Agriculture and Farmers Welfare,
and all others interested

On Critical Policy Issues in India's Agricultural Economy

Issue 7, October 2018

Contents

1. Micro Irrigation and Horticulture in Himachal Pradesh: Opportunities and Challenges 2
2. Performance of the Kisan Call Centre (KCC) in Assam 5
3. Losses in Neera Production Due to Inefficiencies in Marketing 8
4. Doubling Incomes of Tribal Farmers through Coffee Cultivation in Andhra Pradesh & Odisha 9

Compiled and Edited by
Center for Management in
Agriculture (CMA),
Indian Institute of Management
Ahmedabad

Contact:

Prof. Poornima Varma, or

Prof. Vasant P. Gandhi

Chairperson CMA

cma@iima.ac.in

Phone: +91-79-6632-4651

Acknowledgements: Nikita Pandey,
Dipali Chauhan, Nicky Johnson

Based on Research &
Contributions of: 15 Agro-
Economic Research Centers
and Units, supported by
Ministry of Agriculture &
Farmers Welfare

Micro Irrigation and Horticulture in Himachal Pradesh: Opportunities and Challenges

For further details contact:

Arvind Kalia, Anil Kumar, Sujan Singh, Nisha Devi, Vamika Darhel,

Agro-Economic Research Center, Himachal Pradesh University, Shimla.

aerchpushimla@gmail.com; Phone: 0177-2830457

Introduction

- Micro irrigation is an important recent innovation and a definite advancement in irrigation technology. Micro irrigation includes both drip and sprinkler method of irrigation. In drip irrigation, small quantities of water are applied on or below the soil surface in drops, tiny streams or sprays through special tubes, emitters and applicators. Micro irrigation encompasses a number of methods or concepts such as bubblers, drip, trickle, mist or spray and sub-surface irrigation.
- The Government of India has implemented schemes on micro irrigation with the objective to enhance water use efficiency in the agricultural sector by promoting appropriate technological interventions like drip & sprinkler irrigation technologies and encouraging the farmers to use water saving and conservation technologies.
- The area covered under Micro Irrigation in Himachal Pradesh as on 31st August, 2016 was 1289.62 hectares. The fund allocated for micro irrigation under Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) was Rs. 450 lakhs for the year 2014-15 and 75 lakh for the year 2015-16 and the funds approved for micro irrigation under PMKSY was Rs. 225 lakh for the year 2016-17.
- The water use efficiency under conventional surface method is very low due to substantial distribution losses. Recognizing the fast decline of irrigation water potential and increasing demand for water from different sectors, a number of demand management strategies and programmes have been introduced in order to save water and increase the existing water use efficiency in Indian agriculture. Micro Irrigation Systems (MIS) have proved to be an efficient method in saving water and increasing water use efficiency as compared to the conventional surface method of irrigation, where water use efficiency is only about 35-40 percent. The benefits of micro irrigation in terms of water saving and productivity gains are substantial in comparison to the same crops cultivated under surface method of irrigation. Micro irrigation also reduces energy (electricity) requirement, problem of weeds, soil erosion and cost of cultivation. The coverage of drip (2.13 percent) and sprinkler (3.30 percent) method of irrigation is meagre compared to its total potential.
- The State Horticulture Department has taken steps to popularize the micro irrigation systems in all the districts of the state except for Lahaul-Spiti and Kinnaur. The study was conducted in two districts, Kangra and Bilaspur, out of the ten where MIS have been installed. Kangra district was chosen as it has the largest area under MIS while Bilaspur was selected as it had a relatively higher number of beneficiaries. The selected districts were divided into two development blocks i.e., Indora and Dehra in Kangra; and Jhanduta and Sadar in Bilaspur district on the basis of having largest number of MIS.
- Sampling was done in a way to cover all classes of beneficiaries in the scheme. In each of the selected blocks 25 vegetable farmers and orchardists using MIS were randomly selected from the areas having sufficient concentration of MIS. A total of 100 farmers and orchardists were selected as the sample.

Figure 1: Drip Irrigation System



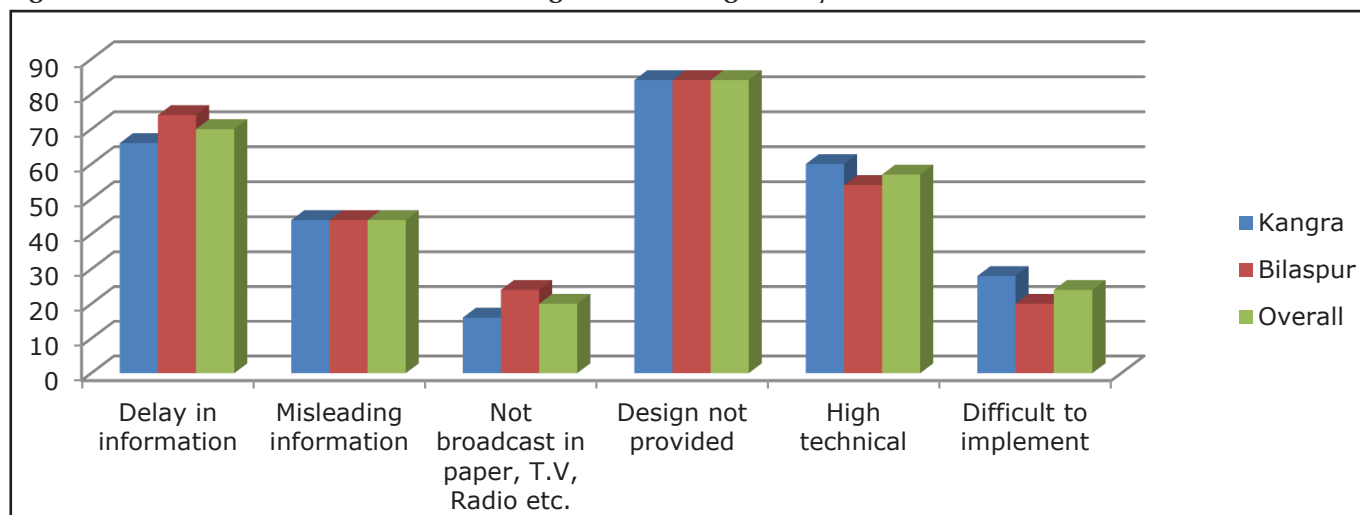
Source: www.agrivalley.com; www.irrigationinnovation.org

Findings

- It was found that the activities of micro irrigation have increased over time but the farmers were facing many problems including construction, information, design and loan for the MIS. Farmers also faced problems with regard to inputs, transportation and harvesting of crops.
- A majority of farmers reported that information

about the MIS was not provided on time and the information which was provided was misleading (Figure 2). Detailed information about the MIS was not broadcasted in newspapers, televisions and radios. Majority of the farmers reported that the design of MIS was not provided by the concerned department and about 50 percent reported that the MIS was highly technical making it difficult for them to implement it.

Figure 2: Issues related to information and design of Micro Irrigation Systems



Source: AERC Shimla.

- Most of the farmers faced problems related to high price of materials, followed by high rate of interest,

delay in sanction of loans and non-availability of materials (Table 1).

Table 1: Problems of availing loan and construction of Micro Irrigation Systems

Problems faced by farmers	Overall	Problems faced by farmers	Overall
High rate of interest	82	Material not available	45
Delay in loan sanction	74	High price of material	83

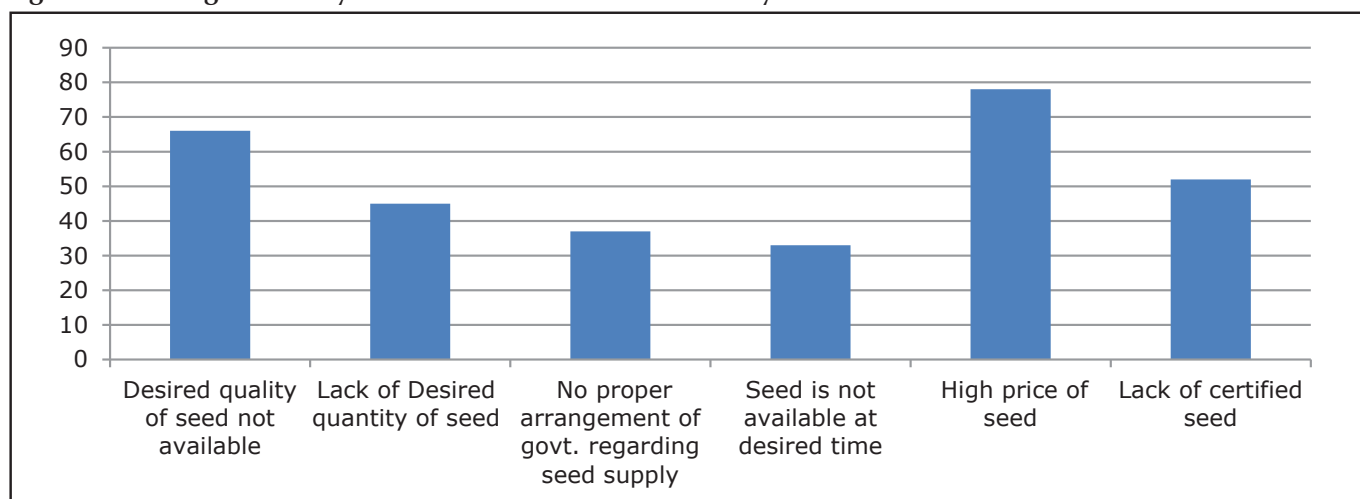
(% multiple responses)

Source: AERC Shimla.

- In the study areas, majority of farmers faced the problem of high price of seed and non-availability of the desired quality of seed. The seed which was

available was not certified. The quantity desired was not provided (Figure 3).

Figure 3: Challenges Faced by Farmers in terms of Seed Availability

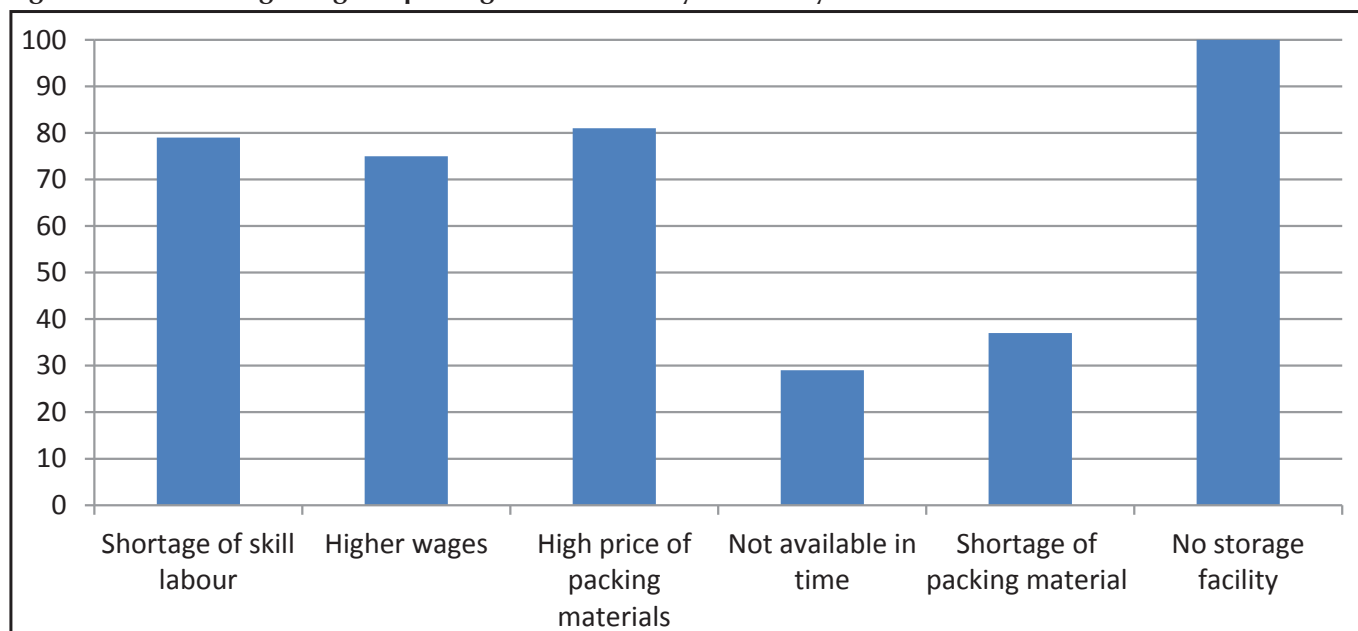


Source: AERC Shimla.

- Fruit crops are generally cold stored in the peak season and are taken out at the time of scarcity which results in higher prices to the producers. However, it was found that in the study areas, there were no

cold storage facilities. Majority of farmers reported lack of skilled labour, high wage rate, high price of packing materials and non-availability of storage as the problems (Figure 4).

Figure 4: Problems in grading and packing of fruits faced by beneficiary farmers

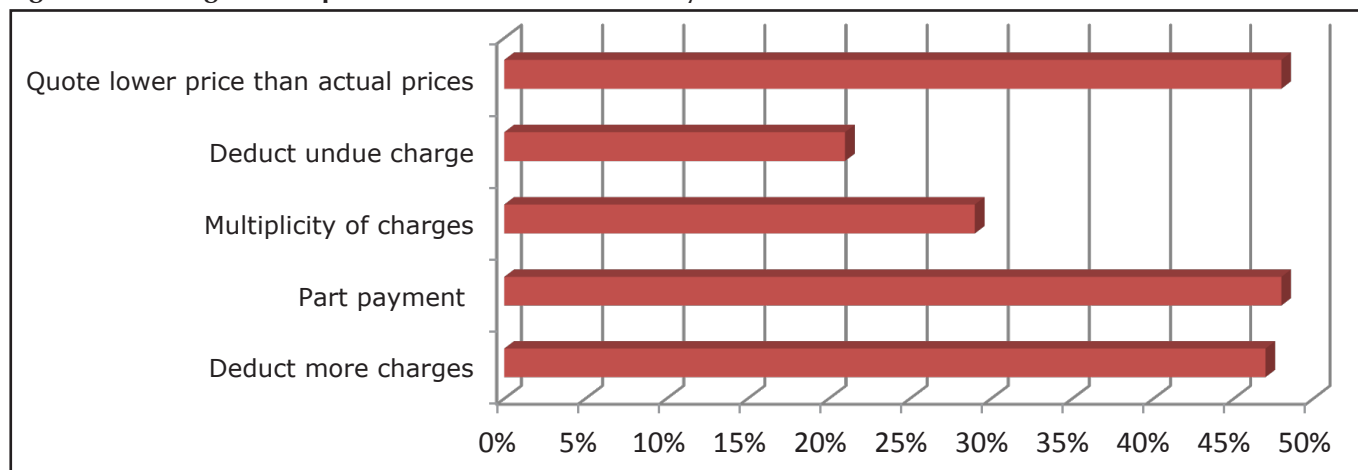


Source: AERC Shimla.

- The farmers or fruits growers were distressed due to the malpractices by commission agents and other market functionaries. About 48 percent farmers reported that the commission agents generally quoted lower prices than the actual price at which

the produce has been sold. They further reported that the commission agents gave them payments in instalments. About 47 of the farmers believed that the commission agents deducted more charges (Figure 5).

Figure 5: Challenges of malpractices in the markets faced by farmers



Source: AERC Shimla.

Recommendations

- Government should organize awareness camps about Micro Irrigation Systems at the village level.
- Keeping in view the perishable nature of vegetables and fruits and variations in market prices, adequate storage facilities should be developed. Further, arrangements should be made to provide latest information regarding prices and arrivals of the

vegetables and fruits in the markets.

- Vegetable and fruits processing units in the producing areas should be establishment as it may improve the profitability by reducing the losses in picking, grading and packing.
- Arrangements should be made to provide low interest loan, sanction of loan on time and the provision of subsidies in time should also be made. Good quality

of seeds and fertilizers must be provided in better quantities.

- Market facilities must be expanded by developing infrastructure and improving transportation facilities.
- In present marketing system of vegetables and fruits, most of the benefits are reaped by the middleman.

An attempt should be made to strengthen the marketing system by organizing cooperative societies, particularly for small farmers. This would help in minimizing the margin of the intermediaries and will ultimately ensure better share of producers in the consumers' rupee.

Cover Photo: www.incrediblehimachal.in

Performance of the Kisan Call Centre (KCC) in Assam

For further details contact:

Anup Kumar Das, Ranjit Borah

Agro-Economic Research Center, Assam Agricultural University,
Jorhat, Assam.

anup_aau@yahoo.com; Phone: 0376-2340096

Introduction

- Use of appropriate technology in farmers' fields is very important for agricultural development. The existing network of extension workers is under tremendous pressure due to changing agricultural technology, large number of farmers and resource crunch. In this backdrop, modern Information and Communication Technology (ICT) can provide a good solution to the problems faced by the farming community.
- For quick transmission of technology and latest technical updates and to resolve farmers' problems, the Kisan Call Centre (KCC) was established in Guwahati, Assam in January, 2004 covering the neighbouring states such as Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura.
- The basic objective of the call centres is to provide information to various queries related to agriculture and allied sectors. The farmers can ask queries in their own local languages like Assamese, Bengali, Garo, Khasi, Nagamese, Manipuri, Adi and Mizo. The call centres operate from 6:00 a.m. to 10:00 p.m. seven days a week. The KCC services were available countrywide on a single toll free number 1800-180-1551 (from 13th February, 2009).

Findings

- The main objective of the study was to assess the status and performance of the systems, ease and usefulness of the systems, information needs of the farmers, extent of the solution provided and means of farm performance.
- The study was based on both secondary and primary data. The secondary level data was compiled from the MIS Report, Ministry of Agriculture and Farmers Welfare, Government of India and the primary level data was collected in three different stages through three sets of questionnaires from the supervisor and Farm Tele Advisor (FTA) working with the KCC and

finally from the actual users and non-users of KCC from 100 farmers (80 users and 20 non-users) of two sample districts of Assam, Kamrup and Sivasagar.

- According to the responses of the supervisor of KCC Guwahati, the ability to respond to the farmers questions together with the equipment in place (both hardware and software) had undergone marked changes, particularly since 2012. The KCC had obtained study materials such as extension booklets, agriculture-related books and papers from the market on their own to address the issues raised by the farmers. However, they were not happy with the content relating to technological innovations, status of implementation of government schemes and various price and market-related issues.
- All the queries were answered by the Kisan Call Centre agents, known as Farm Tele Advisors (FTAs) (Level-I), who used to respond to the farmers' queries instantly. There were 30 FTAs at KCC Guwahati and by qualification, all were graduates and above in agriculture or allied fields and had excellent communication skills in their respective local language. The FTAs mostly visited the websites like Kisaan Knowledge Management System (KKMS), Agricultural University Portal and AccuWeather for reference. Other websites occasionally (50 percent) used by the Centre included Farmer's Portal and AgMarket.
- There was no report of call escalation either to the Level - II (State government officials) or Level - III (Nodal officers) experts in the study area. FTAs were found to handle/manage the farmers' calls 16 hours a day.
- About 30 percent of the FTAs serving in the KCC were experienced. 50 percent reported that the available hardware was working well and up-to-date for the work requirements. 60 percent of the FTAs agreed that the software was up-to-date, fast and user-friendly. It was also recorded that at times, some calls got dropped or were mishandled and the existing software occasionally failed to check the repeated irrelevant calls.
- More than 57 percent of the respondents reported that internet connectivity at the KCC was adequate enough to perform their duties. The knowledge

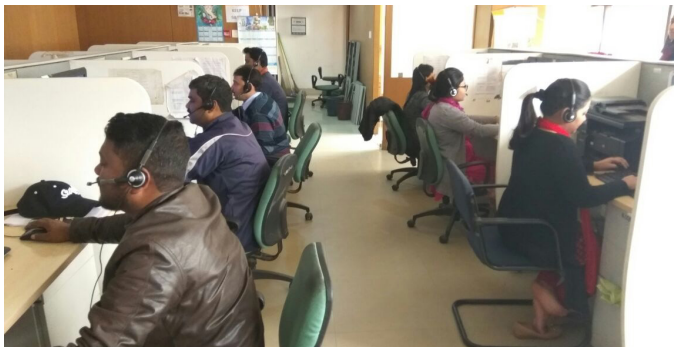
source for answering the farmers' questions included self-knowledge (100 percent) followed by Colleagues and Supervisors (53 percent), Extension Booklets (53 percent) and Internet Search (47 percent).

- All the FTAs reported that the KKMS website was used all the time as the website was easy to use, very fast and the system screens were clear. The Farmer's Portal website was occasionally used by the FTAs as the information was not up to date. The mKisan website was not used in the KCC, Guwahati. Insufficiency of video surveillance was reported by all the FTAs.
- More than 63 percent of FTAs reported that the training was helpful in understanding the call handling procedure as well as for updating the knowledge base in order to answer farmers' questions.
- The FTAs reported that there were good working relationships between the farmers and the FTAs. The farmers seemed to be satisfied with the handling and speed of responses on their queries, as perceived by more than 83 percent of the FTAs. However, there were some difficulties in the understanding of a few scientific and technical terms by the farmers.
- It was observed that majority of the FTAs were quick in responding to calls and were able to manage the calls efficiently. Further, most of the FTAs had

sufficient knowledge and were capable of answering the farmer's questions themselves. There were no records of escalation of the calls on to higher levels to address farmer's questions. It was also observed that majority of the FTAs were highly motivated, disciplined and punctual in attending to their duties and they used to take good initiative to improve, innovate and perform better in the KCC.

- A significant number of calls were received daily (200 to 300) by the FTAs in the KCC. The usefulness of KCC was reiterated by FTAs especially in the interest of the farmers in particular and the state agriculture in general. In view of its continuous endeavour to help the farmers without loss of much time and energy, more than 96 percent of the FTAs strongly recommended for continuance of the Scheme with renewed support from the government.
- The results of the farmers' survey indicated that the educational level of the KCC-user was higher as compared to the non-user farmers. The findings of the study further showed that all the sample farmers were well aware of the activities of the KCC and 78.75 percent of the sample farmers' frequently took advice on different agricultural issues. The other major sources of information included fellow farmers (78 percent), extension workers (64 percent) and meetings and demonstrations (43 percent).

Figure 6: Spreading Awareness of Kisan Call Centres



Source: AERC Assam; www.gramin.org.in

- Regarding quality/usefulness of information, the highest average score was secured by extension workers at 3.48, followed by fellow farmers at 3.47 and the KCC at 3.08 out of 5. This indicates that the extension workers and fellow farmers were comparatively better source of quality information. It was observed that out of the total sample farmers, 68.75 percent farmers used internet from their mobile phones, usually to look for weather report and other information.
- Average number of calls per year was reported at 1,698. Average waiting time per call per households was 1.56 minutes. Majority of the sample farmers reported that due to poor network connectivity in the study area, it required more time to connect with

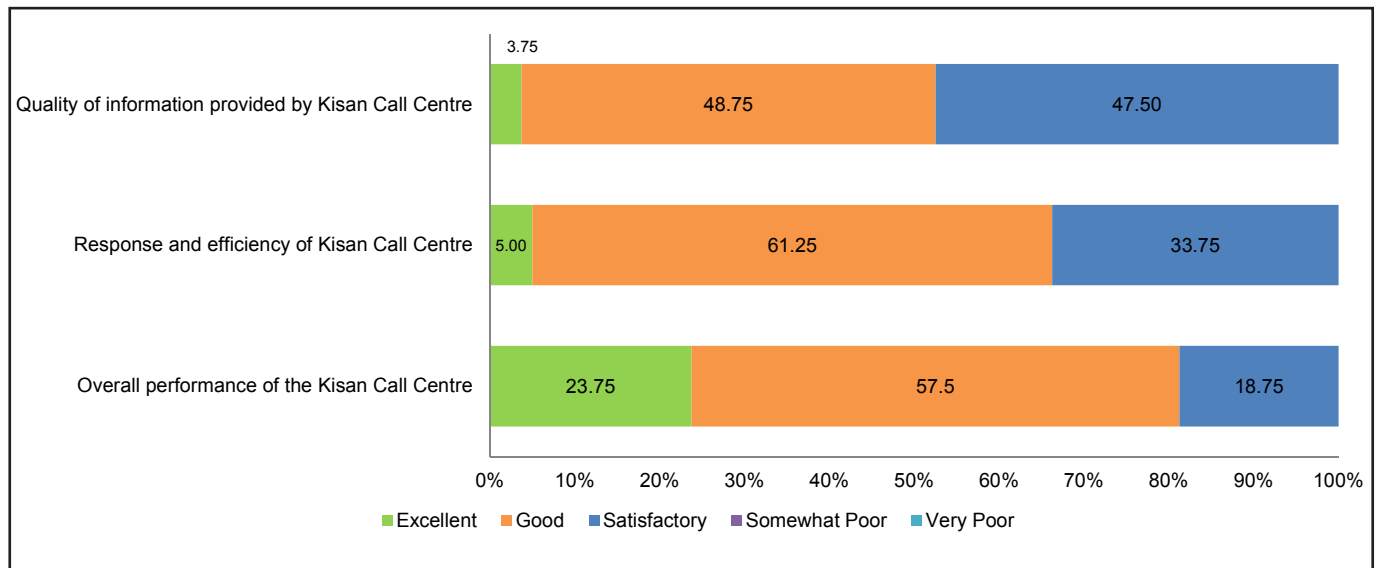
the KCC system with their mobile phones. Moreover, call drop percentage was 9.01 and no proper answers were given for 3.71 percent of the calls. However, 87.28 percent of the calls were effectively answered. Out of the total effectively answered calls, 65.08 percent calls were related to technical information, 6.65 percent calls were for price and market related information, 6.95 percent calls were related to government schemes, 8.36 percent calls were weather-related and the remaining 0.24 percent of the calls were for other information like crop insurance, KCC loans etc.

- In the overall assessment, 52.50 percent of the sample user-farmers reported that the quality of information provided by the KCC was excellent/good, while

47.50 percent reported it to be satisfactory. About 66.25 percent of the user-farmers considered that the call efficiency under KCC was excellent/good. About 81.25 percent of the user-farmers reported that the overall performance of KCC was excellent/good. None of the user-farmers reported that the efficiency of the KCC, or the quality of information provided by the KCC was poor (Figure 7). Farmers found the KCC to be very useful as no other agency or department in the state communicated directly with the farmers and provided solutions to their problems instantly.

- The KCC in the State is an important source of agricultural information despite some weaknesses as per report of the sample farmers. The major weaknesses of the KCC were inadequate infrastructure support, lack of field/practical exposure, lack of co-ordination among the different departments of the state government and with the KCC, lack of regular training for the FTAs, lack of regular updates of the Government scheme related information and the contractual nature of appointment.

Figure 7: Farmers' Overall Assessment of Different Aspects of Kisan Call Centre



Source: AERC Assam

Recommendations

- The FTAs are the principal agents who ensure active participation of the KCC users/farmers. It is therefore, essential to train them at regular intervals to keep them updated of the recent developments. Along with the on-the-job training, field visits are equally important for them. Publicity regarding the activities of the KCC among the farmers is highly desirable.
- The State Government should make arrangements to disseminate demand and price information on a regular basis through websites and other media to make farmers aware of different market situation and prevailing prices. All the stakeholders should be updated about the information regarding various central and state government schemes for their benefit.
- Since it was noted that most irrelevant calls with abusive languages were received after 8:00 p.m., it is suggested that the timings of the KCC be changed from 8:00 a.m. to 8:00 p.m.
- Coordination among different departments of the state government with the KCC should be done in the larger interest of the farming community.
- Since, KCCs have been providing workable solutions to many of the pressing problems encountered by the farmers instantly, the scheme should be declared as a permanent scheme of the Central Government.
- Considering the nature of job and dedication of the KCC personnel, the existing policy of contractual appointment in the KCC should be replaced by that of permanent one and the eligible benefits should be extended to them.

Losses in Neera Production Due to Inefficiencies in Marketing

For further details contact:

K. Jothi Sivagnamam, Ashraf Pullikamath

Agro Economic Research Centre, University of Madras, Chennai.
aercchennai@gmail.com; Phone: 044-25366418

Introduction

- Coconut farming in Kerala is facing multiple challenges ranging from increasing of input costs, price fluctuations and the failures in marketing. To revive the coconut sector, the farmers are tapping the potential of Neera. Besides being a health drink, Neera has the potential to revolutionise the farm sector of the state, give a boost to the economy and provide jobs to many. The idea has been widely welcomed as this would delink the coconut economy from the fluctuations in coconut oil prices and would be a viable value addition.
- Neera is the sweet, oyster white coloured sap, tapped from the coconut and is a delicious health drink with minerals, sugar and vitamins. The most notable advantage of Neera as a health drink is its low Glycemic Index (GI) (35) which is an indicator of the extent of sugar being absorbed by the one who drinks it, making it preferable for even diabetic patients. Food items with GI less than 55 are marked as low GI foods and they have high demand globally. Neera is an unfermented drink which doesn't contain alcohol (Table 2), but when fermentation happens then the same Neera becomes Toddy (Palm Wine). Thus, Neera production requires precise adherence to timing, strict procedures and cautious handling. Approximately, there are eighteen crore coconut trees in the state and around 10 percent of them are suitable for the tapping of Neera.

Findings

Table 2: Nutritional Composition of Neera

Total solids (g/100 ml)	15.2-19.7
pH	3.9 - 4.7
Specific gravity	1.058 - 1.077
Total sugars (g/100 ml)	14.40
Original reducing sugars (g/100 ml)	5.58
Total reducing sugars (g/100 ml)	9.85
Total ash (g/100 ml)	0.11 - 0.41
Critic acid (g/100 ml)	0.50
Alcohol in %	0.00
Iron (g/100 ml)	0.15
Phosphorus (g/100 ml)	7.59
Ascorbic acid (g/100 ml)	16 - 30
Total protein (g/100 ml)	- 0.32

Source: Indian Coconut Journal, Coconut Development Board, May 2013

- A farmer gets Rs. 1000 per tree for a month if he gives his coconut tree for Neera tapping, whereas toddy tapping fetches him just Rs. 400 per tree for a month. Eyeing the attractive prices, Neera making units were set up across the state, primarily by the farmer groups themselves. With the establishment of retail outlets the launch of Neera was a hit in the first phase.
- However, in the second phase, the momentum died. The tapping of Neera requires adherence to strict procedures right from the starting because as soon as the sap comes into contact with air and the process of fermentation initiates, Neera immediately changes to Toddy.
- For the purpose of sending tapped Neera afresh to customers before the fermentation begins, cold storage chains and the packaging in Tetra packs is essential. Unfortunately, no such measures have been taken.
- Presently, Neera is packaged and sold in plastic bottles, which do not meet the international packaging standards, which results in a lower global demand.
- A single tetra packing unit that can serve up to three districts would cost around Rs. 25 crores and a 10,000 litres capacity cold storage facility would cost up to Rs. 1 crore. The authority has not given any support in this regard and hence, despite a good demand the farmers have not been able to work properly.
- The existing Neera processing and marketing units in the state are working on a fund collected by farmers and their additional costs are borne by loans. When the domestic demand shrinks, the competition of low priced Neera from the neighbouring states such as Tamil Nadu hits farmers very badly.
- Hence, the stake holders i.e., the producer and the tappers, are standing at a crisis. According to the farmer groups and their Coconut Producer Companies (CPCs), even though the government had set up societies and federations to produce Neera on a massive scale, the support has never been provided, which has made the production process unviable for most of the manufacturers.
- It was found that in the northern Kerala the number of tappers available to extract Neera was grossly insufficient. The trees in their area were tall and required more manual labour. The toddy tappers did not want to tap Neera as Neera tapping required comparatively longer time commitment and precision. There were even reported cases of strikes of toddy tappers against Neera tapping.

- The farmers had taken loans to set up plants and had to bear further losses due to insufficient production and marketing.
- Each of these Neera production plants such as Coconut Development Board (CDB) or Central Plantation Crops Research Institute (CPCRI) work

differently, which makes the respective Neera produced different in quality and taste. Neera differs in terms of packaging and durability from place to place, contracting the drink's scope to a small local market.

- Presently, the state lacks in terms of expansion too.

Figure 8: A tapper extracting Neera (left) and Neera (right)



Source: www.thehindu.com; www.3.bp.blogspot.com

Recommendations

- Setting up a common brand name, a logo and a tagline would certainly help in marketing of the product on a larger scale.
- Private and international firms should be hired on contract for marketing Neera in markets where the CPCs cannot operate directly. This would prove to be helpful in accelerating the demand for the drink.
- Neera production can be improved by the timely use of fertilizers and proper intervention of the concerned authorities.
- Rather than setting up individual companies, there should be a centralized system to manage the production efficiently. Only a central nodal agency can address concerns of the farmers and bring them together as an effective entity.

- Updated uniform technology is crucial for the commercialisation of Neera. CDB, CPCRI and Kerala Agricultural University (KAU), the major distributors of Neera should jointly work in this direction at the earliest.
- The government should take necessary steps in tackling the problem with toddy tappers who interfere in Neera tapping, at least in certain regions of the State. The government should encourage Neera as it is a healthy drink over alcoholic drink.
- Training should be given to the tappers and they should also be equipped with the means of treating Neera after it is extracted.
- A uniformity of production and the product is fundamentally required for massive advertisement or awareness campaign about merits of the drink.

Doubling Incomes of Tribal Farmers through Coffee Cultivation in Andhra Pradesh & Odisha

For further details contact:

G. Gangadhar Rao,
 Agro-Economic Research Center, Andhra University,
 Visakhapatnam.
ggrao333@gmail.com; Phone: 0891-2755873

Introduction

- Doubling farmers' income has become a significant objective and both the Central and State Governments have given guidelines and financial support to

achieve this objective. The limited infrastructure, poor soil, weather conditions and remoteness have stood as impediments in the development of tribal communities and farmers. It has become important to enhance the standard of living in tribal areas in general and the farmers' incomes in particular.

- Through changes in the cropping pattern and the establishment of the Coffee Board of India, state governments have tried to bring a vast change in the tribal areas of Andhra Pradesh and Odisha by

increasing the incomes of tribal farmers. The districts selected for the study were Visakhapatnam from Andhra Pradesh and Koraput from Odisha. Data was collected from four villages and the total sample size was 160 farmers.

Findings

- In Visakhapatnam, Gingelly showed the highest net income of Rs. 15,000 in Kharif season followed by Long Pepper. Turmeric took the third spot in the overall average net income of all the farmers, and Paddy stood fourth. It can be concluded that the cash crops Gingelly, Long Pepper and Turmeric have played an important role in the income generation of the peasant community in the tribal areas as compared to the traditional crops.
- Limited agricultural activity was found in the Kharif season in Koraput district, as there were only four major crops which gave low average income to the farmers compared to Visakhapatnam. It was further found that there were only two farming sizes, small and semi-medium for the cultivation, and the net incomes of these farmers were found to be lower when compared to the same farmer groups in the same season in Visakhapatnam.
- There were only two crops, Paddy and Red Gram in the Rabi season in Visakhapatnam district. Paddy had an average total net income of Rs. 8,000 and Red Gram had an average total net income Rs. 6,000. The semi-medium and marginal farmer groups showed the highest net incomes in the Rabi Paddy and Red Gram cultivation. Whereas in Koraput, in the Rabi season the farmers grew just one crop, the net income was low and agricultural activity was found to be less.
- Some other crops grown in Visakhapatnam district were Coffee, Black Pepper and Mango. Out of these three crops, Coffee emerged as the highest net income generating crop for all the farmer groups.
- All the farmer groups involved in the cultivation of Coffee in the tribal area reported the highest net income levels when compared to all the farmer groups of Kharif and Rabi in both the selected districts. Mango was found to be one of the principal crops in the net income generation. Out of selected 11 crops in Visakhapatnam district, Coffee brought a drastic change in the level of income of farmers in the tribal belt. Even though Gingelly and Long Pepper in Kharif and Mango had considerable incomes, the net income from these crops was still less compared to the net income from Coffee cultivation.
- The most traditional crop in the area was Paddy which showed better net incomes in Rabi rather than in Kharif. However, it was found that the average total net incomes were two to three times lower in the selected districts compared to the net revenues of the Coffee cultivation in the same districts. In the Kharif season, other staple crops viz., Maize, Little Millets and Ragi reported meagre net incomes compared to the Coffee. Among pulses, Red Kidney Beans showed three times lower net incomes in Kharif, even though this crop had a good demand in the market. Red Gram also reported four times lower net incomes compared to Coffee, in the Rabi season.

Figure 9: Tribals picking Coffee in Araku Valley (Andhra Pradesh)



Source: www.rediff.com; www.livemint.com

- Under the crops that were grown throughout the year, Black Pepper showed three times lower net income, despite having a higher market price.
- In the tribal areas of Koraput district, there were only eight major crops cultivated in all three seasons including Coffee. Out of these, two staple crops, namely, Small Millets, and Ragi, reported ten times lower net income levels compared to the net incomes of Coffee.

- Further, an oilseed crop Niger reported ten times lower net income. Even the traditional crop, Paddy reported six times lower net incomes than Coffee.
- Black Pepper displayed comparatively little difference in the net incomes compared. Net incomes of Coffee cultivation of medium and large farmers from Koraput district were higher compared to the farmer groups of Visakhapatnam district.

Recommendations

- Single nodal agency in Koraput district is essential for the successful, extensive, and effective governance that would reduce wastage, misdirection and non-execution of the programme.
- A single platform auction hall in the non-traditional areas is an essential redressal measure for some of the market maladies of the Coffee growers. Hence, governments of both the states should invest in the infrastructure to conduct auction of the Coffee production by the Coffee Board.
- Authorized market controlling agency must be arranged in the Coffee growing areas to observe the purchases made by the middlemen or traders by the respective state governments in both the districts. It will undoubtedly curtail malpractices in the market such as taking the extra weight, fixation of low price, unwarranted and unreliable fixing of high moisture condition during the Coffee produce purchase.
- Authorised Marketing *Mandis* should be established since the tribal farmers are selling their products in the weekly markets where they are exploited through mismanagement and malpractices.
- Organic certification centres and value addition training centres should be established by the Coffee Board and be facilitated in all the peasant communities in both the areas. This will enable the coffee growers to get the premium prices for their organic production. It would provide the much needed infrastructure support to the Coffee growers.
- Mission Mode Interventions are highly essential to cover the vast potential area of about 98 percent in Koraput district.
- Community Coffee Growing Counselling Centres should be established with the support of the local self-help groups in the villages in order to make sure that they work properly.
- Policy makers should extend Coffee cultivation in Andhra Pradesh and Odisha. Notably, in Odisha, there is a lot of scope for the cultivation of Coffee, as there are cast areas of suitable land available in tribal areas.



CENTRE FOR MANAGEMENT IN AGRICULTURE (CMA)
Indian Institute of Management Ahmedabad (IIMA)
Vastrapur, Ahmedabad, Gujarat 380015

e-mail: cma@iima.ac.in | **Phone:** +91-79-6632-4650, 6632-4651 | **Fax:** +91-79-6632-4652
Web: www.iima.ac.in