

International Journal of Agriculture Extension and Social Development

Volume 7; Issue 4; April 2024; Page No. 177-180

Received: 04-01-2024
Accepted: 19-02-2024

Indexed Journal
Peer Reviewed Journal

Impact analysis of Kisan call Centre in Odisha

¹Chinmyee Sarangi, ²Prasannajit Mishra and ³Pravat Kumar Roul

¹⁻³Deputy Manager Livelihood (AH & F), CBSAE Development Project Directorate of Extension Education, OUAT, Bhubaneswar, Odisha, India

DOI: <https://doi.org/10.33545/26180723.2024.v7.i4c.520>

Corresponding Author: Chinmyee Sarangi

Abstract

The Kisan Call Center was launched by the Indian Ministry of Agriculture on January 21, 2004 and is now operational in all states of the country in 22 languages. The objective of this program is to help farmers ask questions related to their farming activities such as cultivation of various crops, use of seeds, application of fertilizers, and pest control in various agricultural and horticultural crops. In addition, farmers can also request help with problems related to veterinary medicine, fisheries, weather conditions, various government programs, etc. The evaluation of the Kisan Call Center in the last 4 years, i.e. from 2020 to 2023, was based on the average number of calls per month, the number of calls per discipline, the number of calls per district and the number of calls per hour. On average, 13324 ± 3048 and 13130 ± 3216 calls were made in January and March respectively, 7029 ± 3095 in June and 8831 ± 676 in May, which is very low compared to the average number of calls. Similarly, most of the calls in percentage (%) were from the agriculture sector (53.00), followed by the horticulture sector (25.63) and least from the fisheries sector (0.73), followed by animal husbandry (0.84). Most of the calls were received from Bargarh district (12164) followed by Balangir district (10846). The evaluation shows that during the harvesting of the Kharif and Rabi crops, i.e. in the months of September to March, farmers face the greatest problems when it comes to proper preparation of the field, easy harvesting and control of pests, etc. It also shows that farmers are more concerned about pest infestation during cultivation than other problems and then mainly about the availability of good quality seeds and varieties and the right dosage of fertilizer etc. Farmers had the least problems in the months of May to July as fewer crops were grown during this period and therefore the fewest calls were received. The analysis of calls by district shows that farmers of Bargarh district are more likely to utilize the facilities provided by the Kisan Call Centre, followed by Balangir. In the study of hourly calls to the Kisan Call Centre, most of the calls are received between 9:00 am to 5:00 pm. After 9:00 pm, the frequency of calls is generally very low or negligible. So the population needs to be sensitised to receive more calls from the different districts of Odisha, provide the right solutions and gain their trust in the Kisan Call Centre.

Keywords: Kisan, Centre, Agriculture, government, farmers

Introduction

Agricultural extension and farmer support programs face major challenges in being cost-effective, finding solutions tailored to the needs of individual farmers, and creating an image that appeals to farmers (Ramamritham, 2006) [6]. However, to make accurate and effective decisions on varieties and critical parameters, farmers need regular information and guidance on many technical aspects at the right time and from a reliable source. Most farmers need information on various topics such as pest control and disease management (Saravan *et al.*, 2008) [8]. The information needed differs from farmer to farmer and may be tailored to specific groups, e.g. depending on the size of the landholding or the agro-climatic region (Rivera, 1996) [7]. This is also the case in India, where most farmers do not have information about their farming and related activities (Meitei and Devi, 2009) [5]. The advice provided by the Kisan Call Center helps them to make the right decisions in selecting the right crops, plant and seed varieties, application of pesticides to ensure crop safety and proper cultivation practices so that they can successfully manage their farms and get the best returns with low investment. The system provides farmers with adequate information and

knowledge that is vital for their productivity and livelihood, as well as for performance in agriculture and related sectors. In India, it was also found that the major barriers to farmers' access to information are poor accessibility, low reliability, lack of awareness among farmers about the available sources of information and timely provision of information (Babu *et al.*, 2011) [2]. Sharma *et al.* (2011) [9] observed that Kisan Call Centres are used in agriculture in mountainous areas where access to extension is problematic. The Kisan Call Center aims to achieve the following:

- Immediate, effective, and quality information dissemination.
- Reduce the gap between farmers and agricultural experts, research laboratories, agricultural universities, the market, and businesses.
- The growth of agriculture and related sectors can be seen in the increase in crop yields and farmers' incomes. Today, farmers have many opportunities to learn about technology, markets, finance, and other topics.
- They need targeted information transfer and appropriate support.
- Powerful and effective use of the extensive and

interconnected telecommunications network.

The Kisan Call Centre works with a tight mix of information and communication technology and agricultural technology. It uses a back-end information support structure that is integrated with the overall management information system. People are living in the 21st century with the revolution of information and communication technology, which is responsible for comprehensive access to computer technology and mobile facilities in the social structure. Technology, in turn, influences society, growth, and the social environment (Manoj, 2006) [4]. Information and communication technology (ICT) encompasses all technologies that enable the handling of information and facilitate various forms of communication between human actors, and between humans and electronic systems (Acharya *et al.*, 2013) [1]. In today's world, information and communication technology (ICT) is increasingly used and plays an important role in the development of agriculture and socio-economic development (Farooqi *et al.*, 2002) [3]. The Kisan Call Centre enables farmers to discuss their field problems directly with Farm Tele Advisors (specialized in agriculture and related issues) who can efficiently investigate the problem and provide the solution directly in the local language. A national eleven-digit toll-free number 1800-180-1551 has been set up for the Kisan Call Centre. Communication with this number is possible via landlines and cell phones of all telecommunication networks. Farmers' questions are answered and a summary of advice in 22 local languages is sent by SMS to calling farmers from 6:00 am to 10:00 pm (4 pm) 365 days a year. If the agent in the Kisan call center is unable to solve the farmer's problem immediately, the calls are forwarded to designated experts (Level II). These experts are Subject Matter Experts (SMSs) from State Departments of Agriculture (SDAs), ICAR Institutes, KVKs, and State Agricultural Universities (SAUs). Farmers regularly use this facility to get solutions to their problems related to agriculture and most of the farmers are satisfied with the recommendations of the specialists. These call centers operate in 21 different locations across the country and cover all states and UTs. The Nodal institutions also regularly monitor and review the various activities of the Kisan Call Centers to make them

work effectively. Recording the calls on the server makes it easier for the monitoring officials to listen to the conversations between the FTA and the farmer to check the quality of services provided.

Materials and Methods

The Kisan Call Centre (KCC) Odisha is located in the Directorate of Extension Education, OUAT, Bhubaneswar under the guidance and cooperation of the Nodal Officer, Kisan Call Centre. Each and every call answered by KCC has been recorded and stored for quality analysis. Farmers are given detailed information about the solution or the name of the pesticide to be applied on their field after proper briefing by the agent. When a call comes in, the Kisan Knowledge Management System (KKMS) automatically opens and shows farmers details such as the name and district they are calling from. The effectiveness of the Kisan Call Centre in Odisha was evaluated in this analysis. The corresponding data of the Kisan Call Centre in Odisha was studied for the period 2020-2023. The impact analysis was conducted in three dimensions.

1. The calls landed in different months in four years and the mean value was taken
2. The impact of calls landed in different sectors in four years and the percentage was taken
3. The calls landed by district in Odisha in four years and the percentage of calls landed was determined.

Results and Discussion

The performance analysis of Kisan Call Centre, Odisha has been done for the last 4 years i.e. from 2020 to 2023, based on the average number of calls per month. The average number of calls that landed at Kisan Call Centre, Odisha during the 4 years is 133902 ± 3863. Most calls were received in 2023 (153162) as compared to 2020 (107816), 2021 (137382) and 2022 (137246). Most calls, i.e. 13324 ± 3048, were received in the month of January, followed by March (13130 ± 3216) and October (13057 ± 5615). The least number of calls were received in the months of May to July and it was also observed that the number of calls increased year on year from 2020 to 2023. The minimum number of calls in 2020 is attributed to the coronavirus pandemic. Calls then increased again.

Table 1: Monthly Call flow in Kisan Call Centre, Odisha in different years

Month	2020	2021	2022	2023	Mean & SD
January	16326	10480	15564	10924	13324±3048
February	16611	13628	8459	10644	12336±3551
March	13239	14104	8748	16427	13130±3216
April	12680	9126	7429	12425	10415±2566
May	9029	8886	7900	9510	8831±676
June	5802	3243	9129	9943	7029±3095
July	3191	5011	10562	16892	8914±6174
August	7159	11847	11381	15939	11582±3590
September	7596	15628	14702	12922	12712±3591
October	5793	14751	19265	12420	13057±5615
November	4898	14794	11842	13142	11169±4352
December	5492	15884	12265	11974	11404±4324
Total	107816	137382	137246	153162	133902 ± 3863

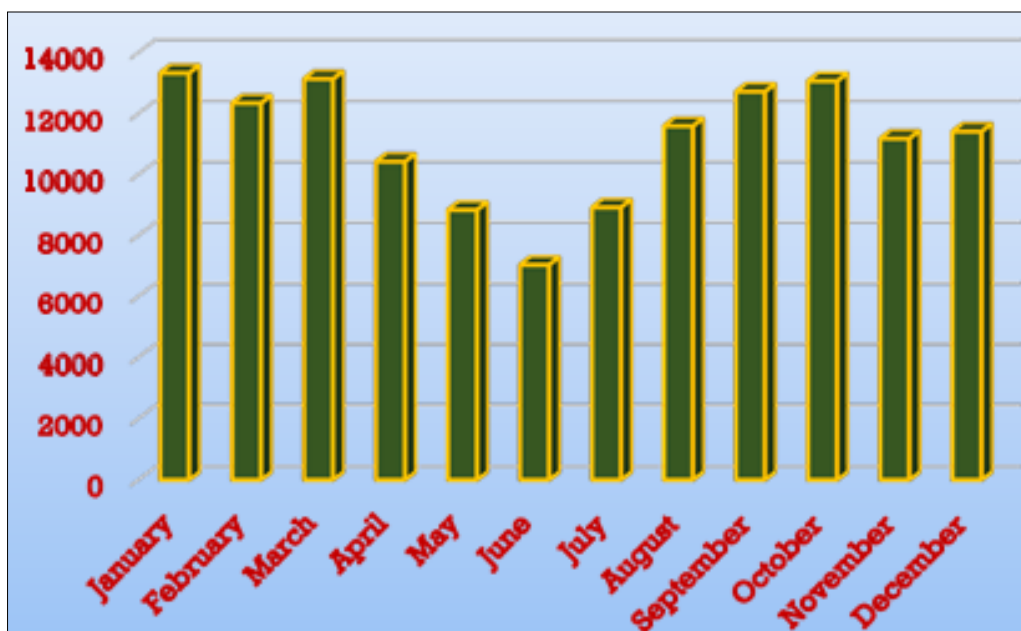


Fig 1: Average month wise Call landing

Analyzing the discipline-wise call landing it was seen that, the highest percentage i.e. 53% calls landed in the Agriculture discipline followed by 25.63% in the Horticulture discipline, 19.80% in weather, 0.84% in Animal Husbandry discipline and 0.73% in Fishery

discipline. Very less number of calls received on Animal Husbandry & Fisheries due to deficiency of experts in KCC and awareness between farmers. The calls may be increased in this field by giving effective solutions and appointing experts related to the discipline.

Table 2: Discipline-wise calls landed in different years

Discipline	2020	%	2021	%	2022	%	2023	%	Mean	%
Agriculture	55891	51.84	73370	53.41	67462	49.15	87124	56.88	70962±12992	53.00
Horticulture	31057	28.81	35796	26.06	36996	26.96	33437	21.83	34322±2631	25.63
Animal Husbandry	1211	1.12	1088	0.79	1138	0.83	1070	0.70	1127±63	0.84
Fishery	797	0.74	1170	0.85	1032	0.75	917	0.60	979±159	0.73
Weather	18860	17.49	25958	18.89	30618	22.31	30614	19.99	26513±5554	19.80

From the hourly call landing data mentioned in table-3, it was evident that the maximum call landed from 9:00 am to 5:00 pm. After 9:00 pm frequency of calls landed was very

low. During winter and rainy season call frequency was very low in the morning hours i.e. from 6:00 am to 8:00 am and also during night hours i.e. from 8:00 pm to 10:00 pm.

Table 3: Average Hourly Call data of Kisan Call Centre, Odisha

Months	6:07 AM	7:08 AM	8:09 AM	9:10 AM	10:11 AM	11:12 AM	12:13 PM	1:14 PM	2:15 PM	3:16 PM	4:17 PM	5:18 PM	6:19 PM	7:20 PM	8:21 PM	9:22 PM	10:23 PM
Apr	268	528	737	1287	1180	1021	727	691	611	735	1111	707	765	565	354	78	4
May	225	461	576	1265	1337	1128	1016	785	671	702	949	511	549	570	543	369	10
Jun	142	173	217	1241	1315	1370	1143	936	832	1065	1181	222	230	208	177	83	1
Jul	191	280	338	1312	1581	1503	1385	1107	1153	1197	1250	391	370	357	293	157	3
Aug	359	659	806	1462	1692	1603	1392	1087	1251	1400	1420	1012	874	732	635	341	4
Sep	382	872	1157	2254	2407	2151	1712	1361	1373	1555	1780	1189	966	833	703	400	6
Oct	414	764	1092	1167	1364	1315	1210	977	873	918	1045	1055	841	791	569	330	23
Nov	302	705	952	1123	1341	1351	1165	1002	964	1032	1109	982	994	815	625	323	7
Dec	255	687	1076	1192	1357	1339	1320	1104	1061	1150	1111	1057	1120	940	721	375	19
Jan	180	572	949	1226	1394	1254	1328	1084	1011	1160	1218	1037	1051	993	703	386	18
Feb	110	328	557	855	1024	1065	988	775	720	786	860	774	542	548	436	266	10
Mar	222	586	973	1475	1613	1720	1437	1113	1060	1210	1237	1157	861	732	640	387	4
Mean	254	551	786	1322	1467	1402	1235	1002	965	1076	1189	841	764	674	533	291	9
Standard Dev.	95	209	306	334	348	314	254	185	234	261	236	319	281	232	179	119	7

The highest number of average calls, landed in Bargarh district (12164) followed by Balangir (10846), Balasore (9358) and Anugul (8606). It indicates that the farmers of

these districts are more aware of the facilities provided by KCC. The lowest percentage of calls received from the Gajapati district i.e. 0.24%, Malkangiri; 0.25%, and

Rayagada; 0.48% and 0.59% calls landed from Deogarh and Kandhamal districts. It is evident from the data that the farmers from these districts are not aware of the facility of KCC. Necessary steps may be taken to make them aware of using KCC Services. The calls received from the districts namely Gajapati, Malkangiri, Rayagada, Kandhamal, Deogarh, Koraput, Nawarangpur, Jharsuguda, Nawapara, Sundargarh, Nayagarh, Keonjhar, Mayurbhanj, Sambalpur, Boudh, Khordha, Dhenkanal and Sambalpur are below state average. Hence, it is suggested that more awareness programs on the Kisan Call Centre especially for young farmers by using media tools like Television, News Papers and Social media.

Table 4: District-wise Average number of Calls landed per year

SL. No	District Name	Total	%
1	Anugul	8606	6.22
2	Balangir	10846	7.84
3	Balasore	9358	6.76
4	Bargarh	12164	8.79
5	Baudh	2865	2.07
6	Bhadrak	7050	5.1
7	Cuttack	8782	6.35
8	Debagarh	817	0.59
9	Dhenkanal	3144	2.27
10	Gajapati	330	0.24
11	Ganjam	5634	4.07
12	Jagatsinghapur	4330	3.13
13	Jajapur	7050	5.1
14	Jharsuguda	1173	0.85
15	Kalahandi	6705	4.85
16	Kandhamal	814	0.59
17	Kendrapara	6300	4.55
18	Keonjhar	2768	2
19	Khordha	3708	2.68
20	Koraput	1084	0.78
21	Malkangiri	340	0.25
22	Mayurbhanj	2803	2.03
23	Nawapara	1193	0.86
24	Nawarangpur	1078	0.78
25	Nayagarh	1924	1.39
26	Puri	7624	5.51
27	Rayagada	661	0.48
28	Sambalpur	2919	2.11
29	Sonepur	6449	4.66
30	Sundargarh	1717	1.24
Total		4341	3

Conclusion

The data from the Kisan Call Centre, broken down by district, shows that farmers make use of the KCC's services and most of the calls came from the Bargarh district. This proves that the farmers of Bargarh district are more aware of the KCC facilities. Farmers in for neighboring district of Bolangir are more aware of the facilities provided by KCC as they are more involved in agriculture and increase awareness among farmers. Farmers in the districts of Gajapati, Malakanagiri, Rayagada, Deogarh, Kandhamal and Koraput are unaware of the existence of KCC. Most of the calls are received between 9:00 am and 5:00 pm, while the number of calls after 9:00 pm is very low as farmers are not aware of the opening hours of the Kisan Call Centre. Most of the calls come from the agricultural sector and from

September to January, when harvest is intensive. After analyzing the facts, it is concluded that farmers are not able to effectively take advantage of the Kisan Call Centre due to lack of awareness. Awareness may be created through various media activities or training programs for people to take the help of KCC when needed so that the number of calls can be increased.

References

1. Acharya HS, Dutta SR, Bhoi RK. Information technology and its role in managing sustainable finance. *International Journal of Advanced Research Management and Social Science*. 2013;2(2):144-149.
2. Babu S, Glendenning CJ, Asenso-Okyere K, Govindarajan SK. Farmers' information needs and search behaviors: Case study in Tamil Nadu, India, *International Food Policy Research Institute, Washington DC, USA; c2011*.
3. Farooqi MS, Singh N, Islam S. Information technology potential and prospects. *Agricultural Extension Review*. 2002;14(5):25-27.
4. Manoj D. Information Technology - Need of the Hour for Rural Development. *Indian Media Studies J*. 2006;1(1):79.
5. Meitei LS, Devi ThP. Farmers information Needs in Rural Manipur: an assessment, *Annals of Library and information studies*. 2009;56(2):35-40.
6. Ramamritham K. Innovative ICT tools for information provisioning via agricultural extensions, 1st IEEE/ACM International Conference proceedings on ICT4D, Berkeley; c2006.
7. Rivera WM. Agricultural extension in transition worldwide: Structural, financial and managerial strategies for improving agricultural extension, *Public Administration and Development*. 1996;16:151-161.
8. Saravan R, Raja P, Tayeng S. Information input pattern and information need of Tribal Farmers in Arunachal Pradesh, *Indian Journal of Extension Education*. 2009;45(1&2):51-54.
9. Sharma BR, Pratap S, Amresh S. Role of Kisan Call Centres in Hill Agriculture, *Indian Journal of Agricultural Economics*. 2011;66(3):531.