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Effectiveness of 'KVK Krishi Patashale' in Bidar district of Karnataka (KVK Bidar: A pioneer institute to initiate an online weekly series of agricultural training program)

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Abstract
In India about 760 millions of farmers are engaged in agriculture. But the past couple of years due to Covid-19 pandemic the direct contact between the agricultural extension personnel and the farmers have experienced a notable extent of gap. To fill the gap between the agricultural extension personnel and the farmers in a alternate & modern way ICAR – Krishi Vigyan Kendra, Bidar has initiated a online weekly series of agricultural Capacity building program & Interaction sessions called 'KVK KRISHI PATASHALE'. So, the study was conducted to measure the effectiveness of this program. This present study was conducted in Bidar district (8 talukas) of Karnataka state, totally 80 respondents were selected (10 from each taluka). Effectiveness of 15 online training of KVK krishi patashale was studied and the findings of the study reveales that soil & water conservation technologies and borewell recharge was found most effective / very useful (83.75%) followed by kharif crops, seeds and improved agronomic practices (71.25%) and the least effective training was Pradhan mantri fasal bhima yojane and crop insurance (37.50%).

Keywords: Capacity building, covid-19, ICT tools, KVK Krishi patashale and pandemic

Introduction
"Everything else can wait, but not agriculture"-Pandit Jawaharlal Nehruji. In India Agriculture is one of the major occupation on which more than half (58%) of our total population depends now the Indian agriculture is witnessing a paradigm shift from production led agriculture to market led agriculture. Government sector is having a structured organizational build ups for the development of Indian agriculture & farmers welfare also many Non-governmental organizations & many private sectors who aim for development of Indian agriculture & sometimes they come together as public private partnership (PPP). In India about 760 millions of farmers are engaged in agriculture. But the past couple of years due to Covid-19 pandemic the direct contact between the agricultural extension personnel and the farmers have experienced a notable extent of gap.

Capacity building is a crucial and continuous requirement for agricultural development. Training needs its context; methodologies and approaches change with developmental phases, strategies and clientele. Training consists of well-organized opportunities for the participants to acquire necessary understanding and skill (Lynton and Pareek, 1990) [4]. ICT revolution is the consequence of integration of computer technology and communication technology. In this information age, the ICTs play a pivotal medium for knowledge dissemination between research systems and farming system (Shreya *et al*., 2020) [7]. To fill the gap between the agricultural extension personnel and the farmers in an alternate & modern way ICAR – Krishi Vigyan Kendra, Bidar has initiated an online weekly series of agricultural training programs & interaction sessions called 'KVK KRISHI PATASHALE' (Agricultural School). Not only in the district but across state of Karnataka ICAR - Krishi Vigyn Kendra, Bidar is a pioneer institute in this approach to reach the farmers timely in these tough times of lockdown throughout the nation. Totally 15 online training programs & interaction sessions have been organized & conducted by ICAR - Krishi Vigyan Kendra, Bidar on agriculture & allied sectors (*Viz*, Horticulture, fisheries, animal husbandry, Agricultural Engeneering, borewell recharge techniques, crop insurance, etc.) not only farmers of Bidar district but also the farmers across the Karnataka state have participated in the program in which totally 1004 number of farmers have been benefited.

According to an estimate more than 60 per cent of the farmers have no access to any source of modern agriculture information reaching to these unreached farmers is a great big challenge before the extension sytesm (Verma SR *et al*., 2014) [8]. Constraints will adversely affect an individual's performance in his profession (P.J Boniface *et al*., 2019) [2]. As KVK Krishi Patashale is an completely ICT based modern approach of reaching farmers, it became important to make an pilot study to measure the effectiveness of the online training programs and the constraints faced by the participating farmers.

Methodology

This research was conducted in Bidar district of Karnataka, in the month of October 2021 by the researchers to evaluate the effectiveness of the weekly online training program and interaction sessions named KVK Krishi Patashale Pioneerly initiated by the ICAR-Krishi Vigyan Kendra, Bidar.

Selection of location and selection of respondents

The study was conducted in Bidar district of North-Eastern Karnataka during the year 2018-19. Bidar district is the northern most part of the Karnataka state in India. Geographically, it resembles the "Crown of the State", also preferred as "Pulse Bowl" occupying its north-eastern end. Bidar district is constituted by 8 talukas (Bidar, Bhalki, Humnabad, Basavakalyan, Aurad, Hulsoor, Chitguppa and Kamalnagar). All the eight talukas were selected for the study. Totally 80 respondents were selected for the study based on their regular presence in the weekly online training program. Among 80 respondents 10 respondents were selected from each taluka who actively / regularly participate in the online training. simple random sampling method was used for selecting the respondents.

Data collection and statistical analysis

A detailed interview schedule was prepared for the study and the data collection was done through both personal interview and phone call interview due to the Covid-19 guidelines in the district. The collected data were coded, tabulated and analyzed in accordance with the objectives of the study using appropriate statistical tests. The statistical tools like frequency and percentage were applied for analysis of the collected information to draw the meaningful and logical conclusions from the collected data.

Results and Discussion

Table 1: Personal characters (Age and Sex) of the respondents

(n = 80)

Age			
Sl. No	**Category**	**f**	**%**
1	Low (< 30 years)	29	36.25
2	Medium (31-49 years)	35	43.75
3	High (Above 50 years)	16	20.00
Sex			
Sl. No	**Category**	**f**	**%**
1	Male	71	88.75
2	Female	9	11.25

*f = Frequency, % = Percentage

In Table no 1 the personal characters like age and sex are indicated, it is clearly revealed that nearly half of the respondents are middle aged that is most of the respondents (43.75%) are middle aged followed by lower age group of respondents (36.25%) and High aged group respondents (20.00%) were found least among the respondents. This results are in conformity with the findings of Chitra (2015) [3]. In terms male and female ratio of participation, majority of the respondents were found male (88.75%) followed by female respondents (11.25%). This results are in conformity with the findings of Ansari *et al.* (2013) [1].

Table 2: Extension participation of the respondents

(n = 80)

Sl. No	Extension activity	Participated		Extent of participation					
		f	%	Regular		Occasional		Never	
				f	%	f	%	f	%
1	Training programs	73	91.25	66	82.50	07	8.75	07	8.75
2	Demonstrations	49	61.25	29	36.25	20	25.00	31	38.75
3	Field days	16	20.00	05	6.25	11	13.75	64	80.00
4	Field visits	31	38.75	11	13.75	20	25.00	49	61.25
5	Group meetings	23	28.75	04	5.00	19	23.75	57	71.25
6	Agriculture exhibitions	20	25.00	09	11.25	11	13.75	60	75.00
7	Krishimela	38	47.50	32	40.00	06	7.50	42	52.50
8	Educational tours	04	5.00	00	0.0	04	5.00	76	95.00

*f = Frequency, % = Percentage

In table no 2 the extension participation of the respondents has been revealed which clearly indicates that majority of the respondents are participating in training programs (91.25%) in which majorly regularly participating (82.50%) respondents were found, followed by respondents participation in demonstrations (61.25%) in which again the regular participation (36.25%) was found high and participation of respondents in krishimela (47.50%) in which majorly regular participating (40.00%) respondents were found. The least participation was found in educational tours (5.00%) and never participated response was found majorly in educational tours (95.00%) followed by field days (80.00%) & Agriculture exhibition (75.00%). This results are in conformity with the findings of Nagesha (2006) [5].

Table 3: ICT tools accessibility

(n = 80)

Sl. No	ICT Tools	f	%
1	Mobile	80	100
2	Television	79	98.75
3	Radio / FM / Community radio	53	66.25
4	Desktop / Laptop	07	8.75
5	Internet	80	100
6	Online banking / Online transactions	41	51.25
7	**Social media**		
a	Youtube	69	86.25
b	Facebook	41	51.25
c	Whatsapp	75	93.75
8	Video conferencing applications	68	85.00
9	e-Mail	75	93.75
10	CD / DVD	23	28.75
11	e-books, e-magazines, e-newspaper	03	3.75
12	Camera	59	73.75

*f = Frequency, % = Percentage *Multiple responses are possible

In table no 3 the accessibility of ICT tools of the respondents has been revealed which clearly indicates mobile phone and internet accessibility is cent percent (100%) and it is quite assumed result as the two ICT tools are basic need to attend the online training program, followed by television accessibility (98.75%), e-mail and WhatsApp (social media)

(93.75%), even YouTube was found accessed by majority (86.25%) of respondents, video conferencing applications (85.00%) and the accessibility to e-books, e-magazines, e-newspaper was found relevantly low (3.75%), desktop/laptop accessibility was also found low (8.75%). This results are in conformity with the findings of Rebekka *et al.* (2015) [6].

Table 4: Motivation factor influencing to participate in the online program (KVK Krishi Patashale)

(n = 80)

Sl. No	Motivational Factors	f	%
1	Dissemination of information about training program through newspaper	68	85.00
2	Dissemination of information about training program through social media (Facebook, WhatsApp, Instagram, YouTube)	80	100
3	Dissemination of information about training program through daily farmers message by KVK Bidar	71	88.75
4	Topics selection for training program by KVK Bidar	72	90.00
5	Resource person selection for training by KVK Bidar	59	73.75
6	Current situation based topics selection for training program	65	81.25
7	Motivation to join training program by family members, RSK's friends, progressive farmers in locality, input dealers	56	70.00
8	Motivation to join the training program by already participating farmers to gain scientific knowledge & clarify doubts	46	57.50

*f = Frequency, % = Percentage *Multiple responses are possible

In table no 4 the motivation factor influencing to participate in the online program (KVK Krishi Patashale) to the respondents has been revealed which clearly indicates dissemination of information about training program through social media (Facebook, WhatsApp, Instagram, YouTube) which is done by KVK Bidar to reach farmers a separate WhatsApp group has been created and also training program details are disseminated through other socal medias was found cent percent (100%), followed by selection of topics for training program (90.00%), dissemination of information about training program through daily farmers message which is done by KVK Bidar was found motivating respondents (88.75%) and motivation to join the training program by already participating farmers to gain scientific knowledge & clarify doubts was found less motivating factor (57.50%) to participate in KVK Krishi Patashale.

Table 5: Effectiveness of online training program & interaction sessions (KVK Krishi Patashale)

(n = 80)

Sl. No	Topics	Very useful		Useful		Undecided		Moderately useful		Not useful	
		f	%	f	%	f	%	f	%	f	%
1	Pre kharif activities and Transplanting/dibbling in Red gram	53	66.25	17	21.25	06	7.50	04	5.00	00	0.0
2	Improved cultivation practices in Ginger	49	61.25	11	1.25	08	10.00	12	15.00	00	0.0
3	Diseases Management in Livestock	38	47.50	20	25.00	13	16.25	05	6.25	04	5.00
4	Seed germination test and seed treatment	42	52.50	17	21.25	12	15.00	06	7.50	03	3.75
5	Kharif Crops, Seeds and Improved Agronomic Practices	57	71.25	06	7.50	12	15.00	03	3.75	02	2.5
6	Weed Management in Kharif Crops	49	61.25	11	13.75	13	16.25	05	6.25	02	2.5
7	Establishment and Management of Fruits Orchards	41	51.25	13	16.25	16	20.00	09	11.25	01	1.25
8	Pest and Disease Management in Kharif crop	49	61.25	09	11.25	14	17.50	07	8.75	01	1.25
9	Soil & Water conservation technologies and Borewell recharge	67	83.75	08	10.00	03	3.785	02	2.5	00	0.0
10	Scientific Fish Farming and Fisheries Dept facilities	36	45.00	22	27.50	19	23.75	01	1.25	02	2.5
11	The role of Bio pesticides in IPM in Agriculture Crops	39	48.75	21	26.25	17	21.25	00	0.0	03	3.75
12	Pradhan Mantri Fasal Bhima Yojane and Crop Insurance	30	37.50	11	13.75	17	21.25	16	20.00	06	7.50
13	Integrated Disease Management in Kharif Crops	37	46.25	13	16.25	16	20.00	09	11.25	05	6.25
14	Integrated Pest Management in Kharif Crops	43	53.75	19	23.75	17	21.25	00	0.0	01	1.25
15	Production Technologies in Vegetable Crops	38	47.50	11	13.75	13	16.25	11	13.75	07	8.75

*f = Frequency, % = Percentage

In table 5 the Effectiveness of online training program & interaction sessions (KVK Krishi Patashale) from the respondents has been revealed, in which the effectiveness has been measured in five different categories (very useful, useful, undecided, moderately useful, not useful) here the undecided indicates the respondents who did not attend the particular training program, the results reveals that soil & water conservation technologies and bore well recharge was found most effective / very useful (83.75%) followed by kharif crops, seeds and improved agronomic practices (71.25%) and the least effective training was Pradhan mantri fasal bhima yojane and crop insurance (37.50%).

Table 6: Constraints faced by the farmers

(n= 80)

Sl. No	Constraints	f	%	Rank
1	Network issues in rural areas	49	61.25	I
2	Erratic power supply	39	48.75	II
3	Lack of skill in handling ICTs	10	12.50	IV
4	Timings of training program commence with work	09	11.25	V
5	Slot availability in the online training program	00	0.0	VIII
6	Region specific language	06	7.50	VII
7	Lack of confidence in clarifying the doubts during interaction sessions	07	8.75	VI
8	Low grasping level of topics explained by resource person	17	21.25	III

*f = Frequency, % = Percentage *Multiple responses are possible

It is very important to bring out the constraints which are faced by the farmers in attending the KVK Krishi Patashale online training program to make improvements and in table no 6 it is revealed that network issues in rural areas (61.25%) was the major constraint faced by the farmers in attending the online training followed by erratic power supply (48.75%) and the Slot availability in the online training program was not found as a constraint by the respondents. This results are in conformity with the findings of Rebekka *et al.* (2015) [6].

Conclusion

The successful and profitable agriculture always depends on scientific and timely operations based on crop and location, with the mandate of transfer of technology and timely training to farming community the ICAR Krishi Vigyan Kendra, Bidar is working towards farmers welfare but Covid-19 pandemic created many obstacles to directly reach farming community. At this never experienced hard times finding a new way to reach farmers timely was the need of the hour were ICAR-KVK Bidar came up with this KVK Krishi patashale concept and got succeeded with its innovative idea of reaching farmers through ICT tools and with the findings of this study we believe that there is much wider scope to improve the program with wider publicity through all the possible means to reach farming community with the priority of health safety of farmers, extension personnel & the society.

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