Constraints of Agri-Allied Sectors in Convergence of Extension Services in Four Major Indian States

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Abstract

Extension efforts in the Agri-Allied sectors are lacking effectiveness as these sectors viz, Sericulture, Fisheries, Animal Husbandry and Horticulture are not converging in their efforts. The present study was conducted in four major Indian states from four regions of the country. All the four allied sector departments were present and functioning in these states. The study was carried out to explore the constraints of allied sectors in convergence of extension services. The results from the study revealed that the major constraint in convergence was that, extension personnel were not trained to work in broad based extension and there was lack of understanding about why convergence is required. Lack of awareness, knowledge and understanding of broad based extension and absence of training in convergence were ranked the second major constraint in convergence faced by the officers followed by lack of policy guidelines, lack of interface for exchange of ideas, information and opinions. It was also found that frequent transfers and political compulsion were the least ranked constraints by the allied department staff. Wide spread awareness and effective capacity building of the officers of agri-allied departments, formulation of clear policy guidelines and timely communication of information through modern Information and Communication Technology (ICT) with sufficient allocation of budget and other resources will facilitate the convergence process in delivering extension services of agri-allied departments.

Keywords: Agri-Allied sector, Broad based extension, Convergence, Extension Services

Introduction

Indian farmers live in an ecosystem, where they have agricultural land along with subsidiary farming in combination with livestock, fisheries, sericulture and horticulture. When it comes to providing extension services to such farmers, the traditional general extension approach does not always help. Convergence is a

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process that brings shared values and responsibilities, acts as a supplementary and complementary mode to achieve common objectives and mutual benefits to converging partners around targeted programmes. Convergence of line departments in service delivery would accelerate the development processes and can contribute towards rapid productive, economic growth and poverty alleviation. However, the issue of convergence has assumed urgency due to substantial increase in outlay on various programmes related to agriculture and rural development in recent years. Convergence is an evolving process and while broad principles can be laid out at the national level, the actual contours of convergence would be determined by resources at the state, district and grass-root level. A number of measures have already been taken at the national level for convergence of programmes of Ministry of Agriculture and Ministry of Rural Development. Convergence is one of the key guiding principles considered in operationalizing extension reforms, wherein,Agricultural Technology Management Agency (ATMA) shall be the platform for convergence and service delivery of all agri-allied sector schemes and programmes at the district level and below.

The Strategic Research and Extension Plan (SREP) and State Extension Work Plan (SEWP) are the instruments that promote convergence of extension activities between line departments and research institutions at the district and state levels, respectively. (Planning Commission 2017).

The Working Group on Agricultural Extension constituted by the Planning Commission, Govt. of India (2007) mentioned that, there is duplication of efforts with multiple agencies doing extension work without convergence. There should be coordinated effort to synergise and converge these efforts at the district level and below to improve the performance of various stake holders. It is essential to route all the State and Central Government extension fund through a single agency like ATMA. It is recommended that convergence and synergy would be the key principles in operationalising extension reforms by channelizing extension fund of agriculture and line departments through the ATMAs. (Planning Commission 2007).

It is evident from the initial experience that convergence has not taken place at various levels satisfactorily. The earlier studies on farmer perception regarding convergence of line departments have pointed out that farmers have a favourable attitude towards extension officers who advise him about seeds and fertilizers

along with livestock, fisheries, sericulture, horticulture and government schemes which is possible through convergence of line departments. The National Institute of Agricultural Extension Management (MANAGE) explicitly promotes the convergence of line departments and has been actively involved in suggesting policy measures through research and capacity building of agri-allied sector officers in this direction. In this context, to explore the constraints of line departments in convergence of extension services and to suggest appropriate measures, the Centre for Extension in Agri-Allied Sectors (EAAS), MANAGE, Hyderabad planned an in-depth study for the "Analysis of Extension Approaches in the Allied Sector Departments".

Methodology

Locale of the study

The present study was conducted using an ex post facto research design. The country was divided into four regions i.e. North, East, West and South and four major Indian states viz., Uttar Pradesh, Odisha, Maharashtra and Karnataka were selected for the study. The above states as well as the districts were selected purposively wherein, all the allied sectors viz., Animal Husbandry, Horticulture, Sericulture and Fisheries were present and operational.

Selection of Respondents

A total 240 Government Officers were selected from two districts of each state. The duration of the study was 1.5 years. The details of sampling areas follows;

Table 1. Selection of respondents

State		**Uttar Pradesh**		**Odisha**		**Maharashtra**		**Karnataka**	
District		**Basti**	**Faiz-abad**	**Sone-pur**	**Bargarh**	**Ahmed-nagar**	**Aurang-abad**	**Kolar**	**Chikka-ballapur**
Depart-ment	Animal Husbandry	10	10	10	10	10	10	10	10
	Horticulture	10	10	10	10	10	10	10	10
	Sericulture	05	05	05	05	05	05	05	05
	Fisheries	05	05	05	05	05	05	05	05
Total		30	30	30	30	30	30	30	30
Gross Total		**240**							

Total sample Size: 240 Officers

In view of the immenseness of the research, it is difficult to discuss all the research findings comprehensively, in a single research paper. One of the specific objectives of the research was "To explore the constraints of allied sectors in convergence of extension services" in selected four states. Therefore, the present paper focusses on research findings pertaining to the above mentioned specific objective. The sample size is 240 officers of agri-allied departments in four states.

Data collection tool

Taking into consideration the scope and objectives of the study, a draft interview schedule was prepared after perusal of available literature and through consultation with experts in the field of extension education and other related fields. After incorporating their suggestions, a well-structured interview schedule was finalized for collection of data from the agri-allied department officers.

In the present study, constraints were operationalised as problems experienced by the department officers in convergence of extension services. In order to identify the constraints encountered, the following procedure was adopted.

A list of possible constraints that might hinder in convergence of extension services was prepared after consulting with non-sample trainees. More possible constraints were added after a review of literature and information available from different sources. Finally, after discussing with allied department experts, important constraints were identified. The selected constraints were presented in the pre-tested schedule and the respondents were asked to respond on a three point continuum for constraints in convergence of extension services (Agree, Undecided and Disagree).

Statistical Analysis

The data collected from the officers were scored, tabulated and analysed using Statistical Package for Social Sciences (SPSS). In view of the specific objective discussed in this paper statistical tools like mean and ranking were used for analysing the data.

The results are presented in the table with mean score and ranking of the constraints perceived by the officers of agri-allied department, which are self-explanatory. To maintain preciseness of the paper, discussion is limited to preferences i.e. rank of constraints and only the top three major constraints faced by each of the four

departments in all the four studied states are discussed in the paper. However, while concluding the paper comprehensive recommendations are drawn in view of all the constraints enlisted in the paper.

Table 2. Constraints in Convergence of Extension Services by the Officers in the State of Maharashtra N=60

Sl. No	Constraints in Convergence	Sericulture Officers (n=10)		Fisheries Officers (n=10)		Animal Husbandry Officers (n=20)		Horticulture Officers (n=20)	
		Mean score	Rank	Mean score	Rank	Mean score	Rank	Mean score	Rank
1	Awareness, Knowledge and understanding of broad based extension is lacking	2.8	2	3.0	1	2.3	4	1.1	2
2	Extension personnel are not trained to work in broad based extension	3.0	1	3.0	1	2.7	1	1.2	1
3	Lack of understanding between different organizations engaged in allied activities	1.9	6	1.6	5	2.4	3	1.1	2
4	Lack of understanding about why convergence is required and important	3.0	1	3.0	1	2.5	2	1.1	2
5	Lack of interface for exchange of knowledge, ideas, information and opinions	2.2	4	2.4	3	2.3	4	1.0	3
6	Communication gap	1.2	7	2.0	4	1.5	7	1.0	3
7	Attitudinal barriers	1.2	7	1.4	6	1.2	9	1.1	2
8	Ego problem / mind set of the officers	1.2	7	1.4	6	1.2	9	1.0	3
9	Organization enforces strict rules which will slow down the convergence	1.0	8	1.2	7	1.1	10	1.0	3

Sl. No	Constraints in Convergence	Sericulture Officers (n=10)		Fisheries Officers (n=10)		Animal Husbandry Officers (n=20)		Horticulture Officers (n=20)	
		Mean score	Rank	Mean score	Rank	Mean score	Rank	Mean score	Rank
10	Work overload/lack of time	1.0	8	1.4	6	1.1	10	1.0	3
11	I do not get timely information/budget/other resources needed for convergence meetings	2.0	5	2.0	4	2.4	3	1.0	3
12	Superiors at job are merely interested in getting work done and are unconcerned about convergence	1.0	8	1.4	6	1.2	9	1.0	3
13	Credible leadership is lacking	1.0	8	1.2	7	1.2	9	1.0	3
14	Required freedom is not given for execution of certain projects in coordination	1.2	7	1.2	7	1.2	8	1.0	3
15	Fear of emergence of conflicts	1.0	8	1.2	7	1.1	10	1.0	3
16	Lack of policy guidelines	2.6	3	2.6	2	2.1	6	1.2	1
17	Training related to convergence is absent	2.8	2	2.4	3	2.2	5	1.2	1
18	Frequent transfers	1.0	8	1.2	7	1.0	11	1.0	3
19	Political compulsion/vested interests are creating hindrance	1.0	8	1.2	7	1.0	11	1.0	3

Table 2 indicates mean score and ranking of the constraints faced by the officers of agri-allied sector departments of Maharashtra state.

Maharashtra is a nontraditional sericulture state producing Mulberry and Tasar silk. The specialty of the state is that, it undertakes 98 per cent of bivoltine sericulture and stood first among nontraditional states and is one of the potential

States in India for silk production. The top three constraints of the Sericulture department were; First, extension personnel are not trained to work in broad based extension and there is lack of understanding about why convergence is required and important. Second, awareness, knowledge and understanding of broad based extension is lacking and training related to convergence is absent and the third constraint is lack of policy guidelines.

Maharashtra has 720 km. of coastline with continental shelf area of 111512 sq. km. The fisheries department mentioned top three constraints as follows: the first is lack of awareness, knowledge and understanding of broad based extension and there is lack of understanding about why convergence is required and important. The second constraint is lack of policy guidelines while the third is lack of interface for exchange of knowledge, ideas, information and opinions and training related to convergence is absent.

During the last two decades, total bovine milk production in Maharashtra has doubled from 39 lakh tones in 1992-93 to 88 lakh tones in 2013-14 and the contribution of local cows, cross-bred cows and buffaloes was about 15 per cent, 42 per cent, 43 per cent respectively. Though the sector is growing rapidly it faces some constraints. The three major constraints identified were; extension personnel are not trained to work in broad based extension; there is lack of understanding about why convergence is required and important and the third constraint was lack of understanding between different organizations engaged in allied activities as well as lack of timely information/budget/other resources needed for convergence meetings.

Horticulture holds a significant share of on an average 30 per cent in Gross State Value Added (GSVA) of crop sector. During 2017-18, the area under horticulture crops was 15.22 lakh ha and production was expected to be 207.54 lakh MT as against an area of 16.73 lakh ha and production of 219.93 lakh MT during 2016-17. The Horticulture department had constraints such as: extension personnel are not trained to work in broad based extension, lack of policy guidelines and training related to convergence is absent. Secondly, there is lack of awareness, knowledge and understanding of broad based extension; lack of understanding between different organizations engaged in allied activities as well as lack of understanding about why convergence is required and important and also attitudinal barriers. The third major constraints are communication gap; ego problem / mind set of the

officers; organization enforces strict rules which slow down convergence; work overload/lack of time; lack of timely information/budget/other resources needed for convergence meetings; superiors at job are merely interested in getting work done and are unconcerned about convergence; credible leadership is lacking; required freedom is not given for execution of certain projects in coordination; fear of emergence of conflicts; frequent transfers; political compulsion/vested interests are creating hindrance.

There is duplication of efforts with multiplicity of agents attending extension work without convergence (Ujjwal Kumar et.al.2012)

Yoga N and Philip H (2017) studied the process of convergence activity of the line departments under different stages in preparation and execution of Strategic Research and Extension Plan (SREP). He reported that, in Anantapur and East Godavari districts all the respondents professed that convergence was achieved during strategic scanning and planning stage of SREP preparation and execution.

Table 3. Constraints in Convergence of Extension Services by the Officers in the State of Odisha **N=60**

Sl. No	Constraints in convergence	Sericulture Officers (n=10)		Fisheries Officers (n=10)		Animal Husbandry Officers (n=20)		Horticulture Officers (n=20)	
		Mean score	Rank	Mean score	Rank	Mean score	Rank	Mean score	Rank
1	Awareness, Knowledge and understanding of Broad based extension is lacking	2.8	1	1.8	1	2.4	2	2.0	3
2	Extension personnel are not trained to work in broad based extension	2.8	1	1.8	1	2.4	2	2.1	2
3	Lack of understanding between different organizations engaged in allied activities	1.4	4	1.0	5	2.5	1	1.1	8
4	Lack of understanding about why convergence is required and important	2.6	2	1.4	3	2.1	5	1.6	5

Sl. No	Constraints in convergence	Sericulture Officers (n=10)		Fisheries Officers (n=10)		Animal Husbandry Officers (n=20)		Horticulture Officers (n=20)	
		Mean score	Rank	Mean score	Rank	Mean score	Rank	Mean score	Rank
5	Lack of interface for exchange of knowledge, ideas, information and opinions	2.6	2	1.6	2	2.3	3	2.2	1
6	Communication gap	1.4	4	1.4	3	1.6	6	1.8	4
7	Attitudinal barriers	1.4	4	1.0	5	1.3	8	1.3	7
8	Ego problem / mind set of the officers	1.4	4	1.0	5	1.3	8	1.3	7
9	Organization enforces strict rules which will slow down the convergence	1.2	5	1.2	4	1.1	9	1.0	9
10	Work overload/lack of time	1.2	5	1.6	2	1.5	7	1.4	6
11	I do not get timely information/budget/other resources needed for convergence meetings	1.4	4	1.2	4	1.5	7	1.3	7
12	Superiors at job are merely interested in getting work done and are unconcerned about convergence	1.0	6	1.2	4	1.3	8	1.0	9
13	Credible leadership is lacking	1.2	5	1.0	5	1.3	8	1.0	9
14	Required freedom is not given for execution of certain projects in coordination	1.8	3	1.0	5	1.5	7	1.0	9
15	Fear of emergence of conflicts	1.4	4	1.0	5	1.3	8	1.1	8
16	Lack of policy guidelines	2.8	1	1.6	2	2.4	2	2.0	3

Sl. No	Constraints in convergence	Sericulture Officers (n=10)		Fisheries Officers (n=10)		Animal Husbandry Officers (n=20)		Horticulture Officers (n=20)	
		Mean score	Rank	Mean score	Rank	Mean score	Rank	Mean score	Rank
17	Training related to convergence is absent	2.6	2	1.2	4	2.2	4	1.6	5
18	Frequent transfers	1.4	4	1.0	5	1.0	10	1.0	9
19	Political compulsion/ vested interests are creating hindrance	1.0	6	1.0	5	1.0	10	1.0	9

Table-3 shows mean score and ranking of the constraints faced by the officers of agri- allied sector departments of Odisha state.

Sericulture is a livelihood activity that goes around the year and provides remunerative income to the farmers. About 15,000 traditional families are involved in silk rearing and one lakh people actively practice sericulture in Odisha. The Sericulture department faced top three constraints as; First, awareness, knowledge and understanding of broad based extension is lacking; extension personnel are not trained to work in broad based extension; lack of policy guidelines. Secondly,there is lack of interface for exchange of knowledge, ideas, information and opinions; lack of understanding about why convergence is required and important; Training related to convergence is absent, while thirdly,the constraint was that, required freedom is not given for execution of certain projects in coordination.

Odisha is an agro-maritime state onthe East Coast with 480 KMs long coastline and the coastal plains (MOFPI, 2017). The State has a gift of six major rivers namely, the Subarnarekha, the Budhabalanga, the Baitarani, the Brahmani, the Mahanadi, the Rusikulya and a number of small rivers. Fish catching is a flourishing industry in Odisha. The world's largest brackish water lake Chilika is famous for fishing. All the rivers meet the Bay of Bengal on the East. Nearly 80 per cent of the people of the state are habituated to eating fish. (Mohanty and Panda, 2017). Quite large number of people belong to the fishing community. The state is endowed with small/bigponds, small/medium and major reservoirs, a large coastal belt suitable for brackish water aqua-culture and deep sea fishing. The Fishery department mentioned the top three constraints as; firstly,lack of awareness, knowledge and

understanding of broad based extension; extension personnel are not trained to work in broad based extension; secondly, lack of interface for exchange of knowledge, ideas, information and opinions; work overload/lack of time; lack of policy guidelines and thirdly, constraints were lack of understanding about why convergence is required and important and communication gap.

Next to agriculture,animal husbandry is the most important economic activity in rural Odisha, which is significantly contributing around 4 per cent to Gross State Domestic Product (GSDP). Odisha exhibited increasing production and productivity of milk, meat and egg during 2016-17. The per capita availability of milk, meat and egg of Odisha improved notably to 120 gms/day, 3.86 kg/annum and 46/annum, respectively during 2016-17 as compared to 2015-16.The Department of Animal husbandry faced top three constraints as; first, lack of understanding between different organizations engaged in allied activities; second, lack of awareness, knowledge and understanding of broad based extension; lack of policy guidelines; extension personnel are not trained to work in broad based extension and third, lack of interface for exchange of knowledge, ideas, information and opinions.

Odisha has over 40 per cent of its total land area under cultivation. It is one of the leading vegetables, plantation crops and rice producing States of the country. The State produces 11.7 Million Tonnes of horticulture products. The department of Horticulture's constraints were firstly, lack of interface for exchange of knowledge, ideas, information and opinions. The second was, extension personnel are not trained to work in broad based extension and the third was lack of awareness, knowledge and understanding of broad based extension; lack of policy guidelines.

Ujjwal Kumar et. al. (2012) reported that, the existing agricultural system is suffering from constraints like – multiplicity of technology transfer system, narrow focus on agricultural extension system, lack of farmer focus and feedback, inadequate technical capacity, lack of local capacity to validate and adopt technology, weak research-extension linkage, poor communication capacity, inadequate operating and financial sustainability etc.

Yoga N and Philip H (2017) reported that, 76.67 per cent of the respondents opined that financing stage in preparation and execution of SREP was also one of the important stages in achieving convergence among the stakeholders.

Table 4. Constraints in Convergence of Extension Services by the Officers in the State of Karnataka N=60

Sl. No	Constraints in Convergence	Sericulture Officers (n=10)		Fisheries Officers (n=10)		Animal Husbandry Officers (n=20)		Horticulture Officers (n=20)	
		Mean score	Rank	Mean score	Rank	Mean score	Rank	Mean score	Rank
1	Awareness, Knowledge and understanding of broad based extension is lacking	2.6	3	2.6	1	2.9	1	2.8	2
2	Extension personnel are not trained to work in broad based extension	2.8	2	2.6	1	2.9	1	2.9	1
3	Lack of understanding between different organizations engaged in allied activities	1.3	13	1.4	6	1.5	7	2.0	9
4	Lack of understanding about why convergence is required and important	2.3	5	2.6	1	2.6	3	2.6	4
5	Lack of interface for exchange of knowledge, ideas, information and opinions	2.6	3	1.8	4	2.4	4	2.6	4
6	Communication gap	1.8	8	1.2	7	1.6	6	1.6	10
7	Attitudinal barriers	1.6	10	1.6	5	1.3	8	1.3	13
8	Ego problem / mind set of the officers	2.0	7	1.6	5	1.3	8	1.6	10
9	Organization enforces strict rules which will slow down the convergence	1.8	8	1.4	6	1.1	10	1.6	10
10	Work overload/lack of time	2.4	4	1.0	8	2.4	4	2.3	6
11	I do not get timely information/budget/other resources needed for convergence meetings	2.1	6	1.0	8	2.1	5	2.2	7

Sl. No	Constraints in Convergence	Sericulture Officers (n=10)		Fisheries Officers (n=10)		Animal Husbandry Officers (n=20)		Horticulture Officers (n=20)	
		Mean score	Rank	Mean score	Rank	Mean score	Rank	Mean score	Rank
12	Superiors at job are merely interested in getting work done and are unconcerned about convergence	1.8	8	1.2	7	1.2	9	1.5	11
13	Credible leadership is lacking	1.6	12	1.2	7	1.0	12	1.4	12
14	Required freedom is not given for execution of certain projects in coordination	1.8	8	1.6	5	1.2	9	1.5	11
15	Fear of emergence of conflicts	1.4	13	1.6	5	1.1	10	1.4	12
16	Lack of policy guidelines	2.4	4	1.9	3	2.6	3	2.4	5
17	Training related to convergence is absent	3.0	1	2.2	2	2.7	2	2.7	3
18	Frequent transfers	1.7	9	1.2	7	1.0	11	1.2	14
19	Political compulsion/ vested interests are creating hindrance	1.4	11	1.0	8	1.1	10	1.2	14

Table 4 shows mean score and ranking of the constraints faced by the officers of agri-allied sector departments of Karnataka State.

Karnataka is the largest producer of silk in the country and accounts for nearly 30 per cent of the country's exports, i.e. over Rs. 1,000 crore (Rajendran, 2016). Still the Sericulture department was observed to face some constraints *viz;*firstly, training related to convergence is absent; secondly, extension personnel are not trained to work in broad based extension while thirdly, there is lack of awareness, knowledge and understanding of broad based extension; there is lack of interface for exchange of knowledge, ideas, information and opinions.

The Fisheries officers in Karnataka expressed their opinion about major constraints as; first,lack of awareness, knowledge and understanding of broad based extension; extension personnel are not trained to work in broad based extension; lack of

understanding about why convergence is required and important. Secondly,training related to convergence is absent and third was lack of policy guidelines.

In Animal husbandry the major constraints were first, awareness, knowledge and understanding of broad based extension is lacking and extension personnel are not trained to work in broad based extension. Secondly, training related to convergence is absent and third was lack of understanding about why convergence is required and important and lack of policy guidelines.

Karnataka occupies a prominent place on the Horticulture map of the Country. Horticultural crops occupy an area of 18.00 lakh ha., with a production of 136.38 lakh tonnes. Although the area comprises only 14.44 per cent of the net cultivated area in the state, the total income generated from the horticulture sector accounts for over 40 per cent of the total income derived from the combined agriculture sector. This accounts for 17 per cent of the Gross Domestic Product (GDP) of the state. The officers of the Horticulture department felt that, the constraint that extension personnel are not trained to work in broad based extension ranked first, followed by lack of awareness, knowledge and understanding of broad based extension which ranked second, while absence of training related to convergence was the third major hurdle in convergence of extension services.

Yoga N and Philip H (2017) reported that, majority (73.33 %) of the respondents discussed about the monitoring of the convergence activity and its importance in effective implementation of ATMA programs.

Table 5. Constraints in Convergence of Extension Services by the Officers in the State of Uttar Pradesh N=60

Sl. No	Constraints in Convergence	Sericulture Officers (n=10)		Fisheries Officers (n=10)		Animal Husbandry Officers (n=20)		Horticulture Officers (n=20)	
		Mean score	Rank	Mean score	Rank	Mean score	Rank	Mean score	Rank
1	Awareness, Knowledge and understanding of broad based extension is lacking	2.6	1	1.6	2	1.9	2	2.3	2
2	Extension personnel are not trained to work in broad based extension	2.6	1	1.6	2	2.0	1	2.5	1

Sl. No	Constraints in Convergence	Sericulture Officers (n=10)		Fisheries Officers (n=10)		Animal Husbandry Officers (n=20)		Horticulture Officers (n=20)	
		Mean score	Rank	Mean score	Rank	Mean score	Rank	Mean score	Rank
3	Lack of understanding between different organizations engaged in allied activities	1.2	7	1.2	4	1.6	5	1.7	6
4	Lack of understanding about why convergence is required and important	2.0	4	1.2	4	1.7	4	2.0	5
5	Lack of interface for exchange of knowledge, ideas, information and opinions	1.8	5	1.8	1	1.9	2	2.5	1
6	Communication gap	1.4	6	1.2	4	1.4	6	1.5	7
7	Attitudinal barriers	1.0	8	1.2	4	1.2	7	1.0	10
8	Ego problem / mind set of the officers	1.0	8	1.2	4	1.0	8	1.1	9
9	Organization enforces strict rules which will slow down the convergence	1.0	8	1.0	5	1.0	8	1.0	10
10	Work overload/lack of time	1.2	7	1.0	5	1.2	7	1.2	8
11	I do not get timely information/budget/other resources needed for convergence meetings	2.4	2	1.4	3	2.0	1	2.1	4
12	Superiors at job are merely interested in getting work done and are unconcerned about convergence	1.2	7	1.0	5	1.0	8	1.0	10
13	Credible leadership is lacking	1.0	8	1.0	5	1.0	8	1.1	9
14	Required freedom is not given for execution of certain projects in coordination	1.0	8	1.0	5	1.0	8	1.0	10

Sl. No	Constraints in Convergence	Sericulture Officers (n=10)		Fisheries Officers (n=10)		Animal Husbandry Officers (n=20)		Horticulture Officers (n=20)	
		Mean score	Rank	Mean score	Rank	Mean score	Rank	Mean score	Rank
15	Fear of emergence of conflicts	1.0	8	1.0	5	1.0	8	1.0	10
16	Lack of policy guidelines	2.2	3	1.6	2	1.9	2	2.2	3
17	Training related to convergence is absent	2.4	2	1.8	1	1.8	3	2.3	2
18	Frequent transfers	1.0	8	1.0	5	1.0	8	1.0	10
19	Political compulsion/ vested interests are creating hindrance	1.0	8	1.0	5	0.9	9	1.0	10

Table -5 reveals the major constraints faced by the agri-allied sector departments of Uttar Pradesh State.

It is observed from the rank and mean score, that the major constraints of the department of Sericulture of Uttar Pradesh are firstly, lack of awareness, knowledge and understanding of broad based extension; extension personnel are not trained to work in broad based extension; secondly, lack of timely information/budget/ other resources needed for convergence meetings; training related to convergence is absent and the third major constraint found is lack of policy guidelines.

Uttar Pradesh is India's most populous state with enough fisheries resources in the form of community ponds, tanks with dominance of rivers and man-made reservoirs. Fish production in the state was only 0.62 million tonnes (2016-17).(Maurya et al. 2018). The major constraints faced by the Department of Fisheries are, firstly lack of interface for exchange of knowledge, ideas, information and opinions; training related to convergence is absent. Secondly, awareness, knowledge and understanding of broad based extension is lacking; extension personnel are not trained to work in broad based extension; lack of policy guidelines and the third constraint was lack of timely information/budget/other resources needed for convergence meetings.

Uttar Pradesh state has emerged as the major exporter of buffalo meat. Its share in total Meat Production in India is 18.23 per cent. The share of Uttar Pradesh in total Milk Production in India is 16.8 per cent. (19th Livestock

Census, 2012). The Department of Animal husbandry faced the first major constraint as; extension personnel are not trained to work in broad based extension; lack of timely information/budget/other resources needed for convergence meetings; secondly, lack of awareness, knowledge and understanding of broad based extension; lack of interface for exchange of knowledge, ideas, information and opinions; lack of policy guidelines and third constraint was found as training related to convergence is absent. These were the major constraints for converging extension services in agri-allied departments.

Uttar Pradesh is the first state in the country to declare those areas as fruit belts where concentrated specific fruit growing areas exist. Major mango and guava fruit producing areas have been declared as fruit belts by the state. The share of Uttar Pradesh in horticulture production in the country is approximately 26 per cent. U.P ranks third in fruits, second in vegetables and first in potato production among all states. The Department of Horticulture is facing many constraints; the top three among them being, extension personnel are not trained to work in broad based extension, there is lack of interface for exchange of knowledge, ideas, information and opinions as the first hurdle for convergence;secondly,there is lack of awareness, knowledge and understanding of broad based extension,training related to convergence is absent and thirdly,lack of policy guidelines are the major constraints.

Yoga N and Philip H (2017) concluded in their study that, the extension reform ATMA was intended to bring convergence between extension and research systems for the effective delivery of extension services. The process flow of convergence activity at different stages as followed by line departments and research institutions was clearly witnessed. But a well-established monitoring system with better convergence of the stakeholders was lacking and standardized evaluation procedures or techniques were not developed or adopted for evaluating convergence of ATMA.

Conclusion

It can be concluded from the research findings of the present study that more or less similar constraints were identified by the officials of allied departments of all four states in converging extension services. It can also be observed that, in all four states, attitudinal barriers, ego problem / mind set of the officers, lack of credible leadership, political compulsion/vested interests, frequent transfers,

fear of emergence of conflicts, organizational barrier and individual freedom for execution of certain projects in coordination were the least ranked constraints by the allied department officers, which indicates that, there is a platform already available at individual as well as organizational level for convergence of extension services. However, among all the constraints, the major constraints identified which were related to extension officers of agri-allied departments were lack of awareness, knowledge and understanding of broad based extension,the officers are not trained to work in broad based extension system, moreover, lack of understanding about why convergence is required were major issues, which need to be handled through creating awareness and effective capacity building of the officers of agri-allied departments. Similarly, formulation of clear policy guidelines and timely communication of information through modern Information and Communication Technology (ICT) with sufficient allocation of budget and other resources will facilitate the convergence process in delivering extension services of agri-allied departments.

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