

Agriculture and Food Security: Theoretical and Practical Aspects of Coordination in Relation to Agricultural Administration

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Abstract

Agriculture and food security are an inextricable phenomena intertwined by nature. The goal of attaining food security is directly and naturally linked with the agriculture and allied sector of the economy. Agricultural administration is a significant factor that determines the food productivity system. It is the vehicle that transport and supply various requirements of farmers at the right time and the right place. The administration of Agriculture and Allied sector is spearheaded by line departments under respective central and state governments. Administration carried out by these line departments have to be coordinated towards the overall objective of attaining food security. Coordination between agriculture and allied departments is essential as it has direct and indirect bearing on food security, qualitatively as well as quantitatively. The significance of coordinating agricultural inputs in relation to coordination of various agencies and departments involved cannot be over-estimated.

The paper attempts to throw light on the significance of coordination among functionaries of Agriculture and Allied departments. The first section deals with theoretical aspects of coordination. The second section of the paper is based on the findings from empirical study of coordination among functionaries of agriculture and allied departments. A case study is carried out by the author on one rural development block in the State of Mizoram, India. Mizoram is the 23rd State of the Indian Union sharing international boundary with Bangladesh and Myanmar. It is one of the few States in India in which food security is yet to be achieved. The paper endeavours to stimulate interests towards coordination in agricultural administration by inviting discussions and suggestions of better practices and experiences from other parts of the world.

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Meaning of Coordination

According to W.H. Newman, “Coordination is the orderly synchronization of efforts to provide the proper amount, timing and directing of execution resulting in harmonious and unified actions to a stated objective.”¹ In other words, coordination also means making arrangements so that all parts of an organization pull together toward defined goals, without duplication, without gaps and conflicts and on time.² Coordination is an inclusive activity in which efforts of all parts and units of an organization are harnessed to ensure achievement of the overall organizational goals. Each part or unit of an organization is significant and has to be included in the synchronization towards the major goals. In the words of Dimock, “Once the goals of the programme have been set, its plans and policies determined, money provided, organization tailored to the need, personnel assigned, directions given, delegation determined, and supervision provided for, than coordination means bringing all of these factors together in an interlocking relationship...”³ It is a means to an end in that it serves as a vital instrument of management to ensure that all individuals or units of an organization functions harmoniously towards overall goals of the organization. Coordination aims to prevent overlapping of works, duplication of works, and other delaying and inefficient forces that causes strain in the overall chain of production or execution.

Significance

In the realm of management and administration, coordination is considered to be the major principle under which all other principles of management are consolidated and applied. According to Mooney, “Coordination is the first principle of organization and includes within it all other principles which are subordinate to it and through which it operates.”⁴ The significance of coordination is felt in its relation to all other principles of organization. For instance, specialization and division of work may provide efficiency in output or production. However, without coordination between various specializing units and between workers working in their respective divisions, there can be no

¹ Avasthi, Amreshwar and Maheshwari, Shriram. (2007). *Public Administration*, Agra:Lakshmi Narain Agarwal, p. 350

² *Ibid.*, p.351

³ Sharan, Parmatma. (1981). *Modern Public Administration*, New Delhi: Meenakshi Prakashan, p. 118

⁴ Basu, Rumki. (2018). *Public Administration: Concepts and Theories*, New Delhi: Sterling Publishers (P) Ltd., p. 201

synchronization of efforts towards the attainment of overall goals and objectives. In large scale organization, due to the necessity of specialization and division of work there is more differentiation wherein various units and branches are confined to their own sphere of work. These units and branches tend to grow and work by developing narrow perspectives away from the overall goals of the organization if they are not coordinated by the management.

Agricultural Administration

Agricultural administration or administration of agricultural sector is a significant factor that determines the food productivity system. The physical nature and requirements of cultivation vis-à-vis various factors influencing it are hugely in the realm of science and engineering. Scientific innovations of hybrid and high yielding variety seeds along with the invention of pest resistant crops are more within the ambit of science. The study and forecasting of climate and soil that have direct impact on crops also seems distant from the subject of governance and administration. Manufacturing of agricultural tools and implements directly falls within the realm of mechanical engineering. However, the issue of administration in agricultural sector is a subject that encapsulate all seemingly distant disciplines involved in agriculture. Agricultural administration is the phenomena channelizing and facilitating the scientific factors and engineering factors along with human, natural, and all other resources involved in cultivation. It is the mechanism that seeks to find solutions for climatic failures on agriculture. Agricultural administration is the interface of all relevant factors and variables in the field of agricultural development. Agricultural administration is the vehicle that transport and supply various requirements of farmers at the right time and the right place.

Coordination in Agricultural Administration

As mentioned above, there are many aspects involved in the development of agriculture and allied sector. The administrative aspect of agriculture is the most complex and sensitive part compared to other aspects involved in agriculture. The administration of agricultural sector requires coordination of all factors and variables that determine agricultural production and development. Agricultural sector is unique from other sectors of the economy such as the industrial or manufacturing sector, and service sector. Agriculture is a time bound sector unlike other sectors of the economy. Implementation and execution in agriculture and allied sector has to match seasonal demands. Red-tapism and inordinate delays in the process of implementation can nullify the objectives of agricultural schemes and programmes. Hence, the essence of agricultural administration lies in coordination of all factors and variables.

Case Study

The major objective of this section is to examine the nature and level of coordination between different functionaries of agriculture and allied departments within the scope of study. The nature and level of coordination as well as factors and variables influencing coordination between functionaries of agriculture and allied departments are analyzed.

The Union of India is comprised of 29 States and 7 Union Territories. Each of the States are divided into districts for the convenience of civil administration. The districts are further divided into development blocks. Each development blocks consists of a cluster of villages and towns. There are more than 5000 development blocks in India. These development blocks serve as the basic unit of administering development programmes and schemes in India. The Case study is confined to Champhai Rural Development Block which is located within the district of Champhai, in the State of Mizoram. Mizoram is the 23rd State of the Union of India. It is located in the north eastern corner sharing international border with Myanmar. The State of Mizoram is divided into eight districts under which there are twenty-six rural development blocks. The district of Champhai is divided into four rural development blocks. Champhai rural development block is located at the district headquarter in Champhai town.

Research Methodology

There are sixty (60) number of functionaries in the Agriculture and allied departments under Champhai Rural Development Block. A mixed questionnaire comprising close ended and open ended questions were administered for the purpose of ascertaining the nature and level of coordination between functionaries of agriculture and that of its allied departments. Out of the sixty number of administered questionnaire, there are a total of thirty-six (36) questionnaires collected and analysed. In brief, the respondents or sample accounts for sixty (60) per cent of the total population. Quantitative data extracted from the close ended questions were analysed and presented through tables and graphs by means of percentages and then interpreted accordingly. Qualitative data obtained from the open ended questions were analysed through 'Content Analysis Method' of analysing qualitative data. The questionnaire was framed based on simple and relevant aspects of coordination and taking into consideration the existing practice and mechanisms on the ground.

Nature and Level of Contacts between Functionaries

- i. *Are you included as a member in the Whatsapp Group meant for friendly interaction between functionaries of Agriculture and Allied Departments?*

Table 01: Interaction via Social Media

Particulars	No. of Respondents	Percentage
Yes	23	64%
No	12	33%
No Respond	1	3%
Total	36	100%

As shown in the Table-68 above, 64 percent of the respondents are included as member in the social networking site (Whatsapp) created for the purpose of gaining friendly atmosphere and cordial relations between functionaries of agriculture and allied departments. However, 33 percent of the respondents are not included in spite of them belonging to the same circle as much as the others who are included in the social networking site. The social networking site is a platform created through the personal initiative of the District Agriculture Officer (DAO) and hence, is not an official mandate. This could be the reason as to why many functionaries are absent as member in the informal social networking group.

- ii. *Have you had any kind of social function for functionaries of agriculture and allied departments so as to familiarize with one another?*

Table 02: Social Functions for Familiarity between Functionaries

Particulars	No. of Respondents	Percentage
Frequently	0	0%
Sometimes	3	8%
Once	3	8%
No	22	61%
Never	8	22%
Total	36	100%

The data portrayed in Table-69 clearly indicates that there is hardly any kind of social functions which are organized for the purpose of cultivating cordial relations and mutual friendship among the functionaries. 83 percent of the respondents replied in the negative in which 61 percent of them said there is an absence of such social functions, while the remaining 22 percent of the respondents said there has never been any kind of social functions meant for the purpose of building conducive environment for coordination.

- iii. *Do you think the functionaries of agriculture and allied departments are familiar with each other?*

Table 03: Familiarity between Functionaries of Agriculture and Allied Departments

Particulars	No. of Respondents	Percentage
Very good	8	22%
Yes	16	44%
Moderate (neither good nor bad)	11	31%
No	1	3%
Very bad	0	0%
Total	36	100%

The data in Table-70 shows that functionaries of Agriculture and Allied Departments are highly familiar with each other. A majority of the respondents, i.e. 66 percent, claimed that they are familiar with each other, while only 3 percent of the respondents have the opposite view. 31 percent of the respondents believe they are moderately familiar with each other. Only 3 percent of the respondent said they are not familiar with each other. It is evident from the data that familiarity among functionaries of agriculture and allied departments is high which further provides fertile working ground for cultivation and nurturing of coordination between them.

The data acquired from the first set of the questionnaire elucidates that functionaries across agriculture and allied departments are familiar with their counterparts in other departments. The data obtained from the first questionnaire regarding the creation of social networking site by the DAO reveals that one-third of the respondents are being excluded which can have serious repercussion on the level of familiarity focussed in the last questionnaire. The data of the second questionnaire clearly indicates that efforts towards building mutual friendship and relations among functionaries are absent. Nevertheless, the last questionnaire has provided a contrasting data in that there exists high level of familiarity among the functionaries of agriculture and allied departments. Regardless of the fact that a major section of the functionaries does not use the social networking site, coupled with the absence of efforts towards building better relations, the level of familiarity is contrastingly high. This can be attributed to the fact that the functionaries are confined to the same community characterized by high level of social interaction which is facilitated by traditional system of societal mutual bonding as well as participation in various civil society groups within the community. It may be strongly argued that the high level of familiarity existing among functionaries of agriculture and allied departments is not due to official initiatives undertaken by the departments, rather it is due to the thriving mode of social interaction within the community in which the functionaries are commonly located.

Nature of Coordination between Functionaries

The second section comprises of question number 3 to 7. This section attempts to analyse the factors and variables influencing coordination so as to ascertain the nature of coordination between functionaries of agriculture and allied departments. The questions are framed based on existing factors on the ground as observed during the preliminary study. It focussed on the intervention mechanism playing significant coordinating role such as the Japanese International Cooperation Agency (JICA) and ATMA. The nature and level of coordination in the normal scheme of functioning as seen apart from the intervention mechanism - JICA and ATMA, is given due emphasis.

- iv. *Under the initiative of ATMA and JICA, do you think the level of coordination between agriculture and allied department is good?*

Table 04: Level of Coordination under Initiative of ATMA and JICA

Particulars	No. of Respondents	Percentage
Very good	6	17%
Yes	18	50%
Yes, to some extent	10	28%
No	0	0%
Very bad	0	0%
No respond	2	6%
Total	36	100%

The above Table-71 clearly depicts that the nature and level of coordination, through intervening mechanism, as perceived by the respondents is good. Among the 67 percent of the respondents who believed that there is good level of coordination, 17 percent are of the view that coordination is not only good, but very good. There are no respondents who replied in the negative. Apart from the 67 percent who replied in the affirmative, 28 percent of the respondents have a moderate view implying that the level of coordination is not bad. However, it is to be noted that several aspects of coordination under JICA and ATMA are of limited nature as they are confined to their own limited functioning sphere. JICA mainly perform administrative works and fieldworks in the jurisdiction of their selected model villages. ATMA serves as a coordinating mechanism by facilitating training and extension services periodically. There limitations are evident from the fact that they functioned as an intervening mechanism. The picture of coordination level will be incomplete without the following corresponding questions.

- v. *Apart from the initiative of ATMA and JICA, has there been common formulation of plans between agriculture and allied departments?*

Table 05: Common Formulation of Plans outside Initiative of ATMA & JICA

Particulars	No. of Respondents	Percentage
Frequently	0	0%
Sometimes	3	8%
Yes	5	14%
No	17	47%
Never	9	25%
No respond	2	6%
Total	36	100%

It is evident from the above Table-72 that instances of formulating common plans and programmes between Agriculture and Allied Departments is a rare phenomenon. The majority of the respondents amounting to 72 percent have replied in the negative, saying that they have not witnessed any instances wherein work plans are formulated in tandem with the other allied departments. 22 percent of the respondents claimed that they have had instances in which work plans are formulated together with the other allied departments. However, the scale of difference between those who answered in the affirmative and negative sheds light on the fact that common formulation of plans between Agriculture and Allied Departments is not a regular administrative feature. The inference drawn from this data can further validate that the nature and level of coordination between agriculture and allied departments lacks a good prospect.

vi. *Have there been meetings in which common problems faced by agriculture and allied departments are discussed?*

Table 06: Meetings for Deliberation of Common Problems

Particulars	No. of Respondents	Percentage
Frequently	0	0%
Sometimes	6	17%
Yes	7	19%
No	19	53%
Never	3	8%
No respond	1	3%
Total	36	100%

The above Table-73 display data to ascertain whether common problems faced by agriculture and allied departments are discussed and deliberated together by the departments. The majority of the respondents amounting to 61 percent have said that there is no such discussion of common problems by the departments. On the other hand, 36 percent of the respondents have answered in the affirmative. It is to be noted here that no respondent has claimed that such common deliberations on common

problems is a frequent phenomenon. In the context of work formulation and implementation, coordination between the departments cannot be effectively attained without serious deliberation on their common problems. The data obtained from this question suggest a negative conclusion towards the nature and level of coordination between agriculture and allied departments in the area of study.

- vii. *Are you aware of the different schemes executed by other departments which are allied to your department?*

Table 07: Awareness of Functionaries Regarding Schemes of Other Allied Departments

Particulars	No. of Respondents	Percentage
Definitely	0	0%
Yes	2	6%
To some extent	4	11%
No	21	58%
Definitely not	9	25%
Total	36	100%

The data portrays in Table-74 shows that 83 percent of the respondents answered in the negative saying they are not aware of schemes and programmes implemented by other allied departments. 11 percent of the respondents claimed that they are aware to some extent while only 6 percent of the respondents have awareness regarding schemes implemented by their allied departments. Coordination between agriculture and allied departments would require functionaries to comprehend the nature and complexities of schemes implemented by their allied departments so as to find optimal area and scope for coordination. The data extracted from the question suggests that sincere efforts towards finding ways and means of inter-departmental coordination is absent.

- viii. *Apart from the initiative of ATMA and JICA, do you think there exist proper coordination between Agriculture and Allied Departments?*

Table 08: Existence of Coordination Apart from Initiative of ATMA and JICA

Particulars	No. of Respondents	Percentage
Definitely	4	11%
Yes	7	19%
To some extent	8	22%
No	14	39%
Definitely not	1	3%
No respond	2	6%
Total	36	100%

The question above is the last of section two of the questionnaire. It attempts to examine the level of coordination from the personal assessment of functionaries in the departments. Apart from the 6 percent who did not respond, 42 percent of the respondents replied in the negative saying they do not believe that proper coordination exists. The remaining respondents amounting to 52 percent have replied in the affirmative, having the belief that there is proper coordination. 11 percent out of the 52 percent even believes that coordination between agriculture and allied departments is definitely existent. The data obtained through this question, if assessed without considering the previous extracted data which are sequentially linked in section two of the questionnaire, suggests that proper coordination is fairly existent between agriculture and allied departments.

The exercise of coordination under the initiative of JICA and ATMA can be said to be good or satisfactory as per the assessment of the functionaries. Data obtained from the second part of section two comprising of question number 5 to 8 lacks consistency in that the data from the last question depicts affirmative tendency. The basic factors and variables influencing coordination between agriculture and allied departments are examined from question number 5 to 7. Data extracted from question number 5 to 7 have negative tendency requiring corresponding data of negativity from the last question. 72 percent of the respondents have stated that there is no common formulation of plans between agriculture and allied departments so as to facilitate effective coordination. 61 percent of the respondent also stated that there are no instances in which inter-departmental meetings are held for discussion of common problems faced by the departments. 83 percent of the respondents are also not aware of the schemes and programmes of their allied departments. In the light of this data, it is evident that the factors and variables influencing coordination have negative impact rather than positive impact. However, in the culminating question majority of the respondents contradictorily stated that there is a satisfactory existence of coordination between the departments. It is a valid statement to argue that the respondents lack or fail to comprehend the true meaning of coordination and its implications. Based on the field observation and interviews, it is learnt that functionaries of agriculture and allied departments are not sensitized towards significance and methods of coordination.

Effective Coordination

This section comprises of two open ended questions seeking to obtain personal viewpoints and suggestions of the functionaries based on their experiences. The descriptive responses from the questions are analysed

by using ‘Content Analysis Method’ which is generally used for analysing qualitative data. The contents of the responses are thoroughly examined for the purpose of identifying the main themes. The main themes are given specific codes. The contents or descriptive responses are then classified under the coded themes so as to note their level of significance by counting the number of times a specific theme occurs in the descriptive responses. The themes are then explained and emphasize accordingly based on their order of frequency.

ix. *What do you think is the reason for absence of effective coordination between agriculture and allied departments?*

Table 09: Main themes identified from the Descriptive Responses in their Order of Frequency

Sl. No.	Internal Factors	Sl. No.	External Factors
1	Management	1	Policy makers
2	Personnel	2	Nature of schemes
3	Structural	3	Scope for coordination
4	Technical		

Descriptive responses to the open ended questions are given by 64 percent of the respondents. The descriptive responses are categorized into themes of internal factors and external factors. Internal factors are described as those phenomena within the context of the agriculture and allied departments, while external factors are those phenomena controlling the departments from outside, that is, the government as a whole. Table-80 depicts the sub themes that fall under internal as well as external factors in their order of frequency or number of times the themes occurred in the descriptive responses. Management related factors determining coordination is the theme that is most frequently emphasized by the respondents under internal factors. On the other hand, factors relating to initiatives of policy makers is the theme that features the most in the description of the respondents under external factors.

The following list presents the factors that are considered as the main reason for absence of effective coordination under each identified sub themes:

1. *Management:* The management or department as a whole is held responsible for -
 - a) Communication gap between allied departments.
 - b) Lack of inter-departmental consultations and deliberations.
 - c) Lack of cooperation between the management or higher officials of agriculture and allied departments.

- d) Tug of war between allied departments with regard to financial allotment in cases of converge schemes for developmental works.
 - e) Narrow perspectives in terms of focussing only on one's own departmental works without any concern for the works of other allied departments.
2. *Personnel*: The functionaries of departments are also held responsible for –
- a) Non-cooperation and lack of friendship between functionaries of agriculture and allied departments.
 - b) Too much of differences in personal opinion of functionaries.
 - c) Lack of awareness and commitment to one's duty and responsibilities.
 - d) Lack of awareness regarding the works of their counterparts in other departments.
 - e) Lack of awareness with regard to the importance of scheme convergence.
3. *Structural*: The structure and systems under which agriculture and allied departments functions as a separate department is also considered as one of the reasons for the absence of effective coordination.
4. *Technical*: The respondents also stated that differences in technology used by the departments is one reason creating hurdles for building coordination.
5. *Policy makers*: Policy makers at the State government level are also held responsible for –
- a) Lack of study and research towards different aspects of coordination.
 - b) No initiative and effective direction for coordination.
 - c) Lack of provision and rules for coordination.
 - d) No effective direction towards scheme convergence.
6. *Nature of developmental schemes*: Development schemes are also considered as one factor affecting low level of coordination due to –
- a) Different guidelines and specific demands of schemes.
 - b) Different schemes implemented by different departments.
7. *Scope for coordination*: The respondents are also of the opinion that there is no scope for coordination between agriculture and allied departments in general. In other words, there is no working ground for nurturing coordination between departments.
- x. *What do you think is important for building effective coordination between agriculture and allied departments?*

Table 10: Main Themes Identified from the Descriptive Responses in their Order of Frequency

Sl. No.	Internal Factors	Sl. No.	External Factors
1	Management	1	Concrete Initiatives
2	Inter-departmental Consultations	2	Central Schemes
3	Personnel	3	Policy Makers

67 percent of the respondents gave a descriptive response to the open ended question. The descriptive responses are categorized into themes of internal factors and external factors. Internal factors are described as those phenomena within the context of the agriculture and allied departments, while external factors are those phenomena controlling the departments from outside, that is, the State government as well as the Central government. Table-82 depicts the sub themes that fall under internal as well as external factors in their order of frequency or number of times the themes occurred in the descriptive responses. Management related factors determining coordination is the theme most frequently emphasized by the respondents under internal factors. On the other hand, factors relating to creation of concrete initiatives for coordination is the theme that features the most in the description of the respondents under external factors.

The following list presents the factors that are considered as significant for building effective coordination under each identified sub themes:

1. *Management*: In order to build effective coordination, the respondents emphasize the vital role of the management or higher authorities of each department towards the under mentioned points
 - a) There should be good cooperation and interaction among the higher officials.
 - b) There should be discussion of work plans and schemes at the Directorate level.
 - c) There should be seamless flow of information from top to bottom in each department.
 - d) Each department should convey the nature and scope of their schemes to the other department so as to find ways to coordinate.
 - e) The management of each department should have concern and care for the plans and proposals of other departments.
 - f) Each department should be well aware of the functional scope in which they should operate in tandem with other departments.

2. *Inter-departmental meetings and consultations*: The respondents also emphasize the significance of meetings and consultations between departments as it can promote coordination in many ways –
 - a) There can be fruitful discussion of works performed by each department.
 - b) There can be discussion towards finding scope for coordination.
 - c) Specific programmes can be organized so that functionaries of different departments can interact to build good cooperation.
 - d) Creation of interactive programmes involving farmers and functionaries of different departments. The functionaries from different departments can apprehend the significance of coordination when they listen to the plight of farmers requiring solution from different departments.
3. *Personnel*: The respondents have described several aspects relating to personnel or functionaries of departments that can contribute towards building effective coordination –
 - a) Functionaries of departments should have deep in-sight and recognition of the fact that coordination between agriculture and allied departments is essential.
 - b) The functionaries should be fully aware of their duties and responsibilities along with the implications it can produce towards coordination with other departments.
 - c) Promotion of cooperation and friendship among functionaries of different departments is necessary for building effective coordination.
 - d) District Agriculture Officer (DAO) has a significant role to play in initiating the process of coordination between agriculture and allied departments.
4. *Concrete Initiatives*: The presence of solid and firm initiatives which will create provisions for coordination between departments is felt necessary by the respondents –
 - a) There should be formal rules and guidelines for facilitating coordination between departments.
 - b) There has to be a designated official to look into various matters and aspects of coordination.
 - c) There should be effective supervision on the existing status and nature of coordination by competent experts.
5. *Central Schemes*: Developmental schemes formulated from the central government can contribute towards building effective coordination between agriculture and allied departments –

- a) Developmental schemes related to agriculture and allied services have to be formulated in such a way that they demand and insist on coordination between departments.
 - b) There are developmental schemes from the Ministry of Agriculture that encompass not only agriculture departments but its allied departments as well. Execution of such schemes in letter and spirit will contribute towards building effective coordination.
 - c) There should be sincere efforts to implement developmental schemes in a coordinated manner.
6. *Policy Makers*: The respondents are of the opinion that policy makers have a vital role in ensuring effective coordination between agriculture and allied departments –
- a) The higher bureaucrats or policy makers should make sincere efforts in exploring scope for coordination between the departments.
 - b) The political executive as well as bureaucrats in-charge of agriculture and allied departments should have an in-depth study of various schemes for the purpose of coordinating one scheme with the other so as to produce optimum output.

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