Determining Factors Of The Development Of Agricultural Extension Office As A Knot For Coordinating Agricultural Development

Wida Pradiana, Oeng Anwarudin, Alt Maryani

Abstract—Agricultural Extension Office has a strategic role to coordinate agricultural development at subdistrict level. This study was aimed to describe and analyze factors affecting the implementation of task, function, and work coordination, also to formulate strategy for the development of Agricultural Extension Office as “knot” to coordinate agricultural development in the subdistrict. This research was conducted in Sukabumi Regency, Province of West Java, Indonesia from May until October 2018. All agricultural extension officers in Sukabumi Regency amounted to 186 people were selected as respondents in this study. Variables analyzed in this study included Institutional Support (X1), Facility Management (X2), Human Resource Management (X3), and Quality Management (X4). Research Data were collected by questionnaire. The technique of data analysis applied in this study included analysis of descriptive statistics, path analysis, and SWOT analysis to formulate strategy for the development of Agricultural Extension Office. Result of study showed that factors of institutional support, facility management, and human resource management altogether affected quality management in the implementation of task and function. The strategies to apply in order to increase effectiveness are as follow: 1) Functioning Agricultural Extension Office (Balai Penyuluhan Pertanian) as a joint secretariat for government, self-help, and private extension workers, 2) Activating deliberation at the level of subdistrict and village, increasing innovation, number of demplot (demonstration plot), frequency of discussion, training, and participatory research at village level by optimizing the role of young extension workers and utilizing ICT for coordination effectiveness, and 3) Establishing partnership and collaboration of role and task among those involved in extension activity. Therefore, all parties may complement each other and share any excess resources, innovation, and technology besides functioning the field and Agricultural Extension Office as a dialogue room and a joint laboratory for training and research.

Index Terms—agricultural extension, innovation, agricultural development.

1 INTRODUCTION

THE regulation of agricultural extension in Indonesia defines hierarchically that agricultural extension institution at subdistrict level is in the form of Agricultural Extension Office or Balai Penyuluhan Pertanian. This institute has strategic role in determining the success of agricultural development. Agricultural extension institution also reflects a successful agricultural development in the subdistrict. This institute has many roles including as the administrative center for agricultural extension workers to coordinate, synergize, and harmonize the activities of agricultural development. Agricultural Extension Office has a quite complex task. The tasks include creating and implementing extension program at subdistrict level; providing and distributing information about technology, production facilities, financing, and market; facilitating institutional development and partnership between main actors and business actors; facilitating capacity building of agricultural extension workers; facilitating the growth and development of economic institution of the main actor and business player; and implementing learning process through pilot farm and farming model development for both the main actor and business actor [1]. The are several factors that affect the implementation of the task and function of Agricultural Extension. Those are management system, leadership, and work atmosphere [2]. However, factors that determine the development of Agricultural Extension Office as a knot for coordinating agricultural development are not yet comprehensively investigated. This study was generally aimed to obtain information related to factors affecting Agricultural Extension Office in implementing its task and function as a knot for coordinating agricultural development. Specifically, this research was performed to describe and analyze factors influencing the implementation of task and function of Agricultural Extension Office; to analyze the effect of each determining factor on the work coordination in Agricultural Extension Office; to formulate the development strategy for Agricultural Extension Office as a knot for coordinating agricultural development in the subdistrict.

2 RESEARCH METHODS

This study was conducted in Sukabumi Regency, Province of West Java, Indonesia from May until October 2018. The basic method applied in this study was survey method using questionnaire collected from a group of people, termed sample. This research was intended to describe, test the correlation, and test the effect between variables. Respondents selected in this study were all agricultural extension workers in Sukabumi Regency, amounted to 186 people and consisted of civil servants and daily workers. The variables formulated in this study consisted of independent variables, namely: Institutional Support (X1) and Facility Management (X2) and dependent variables of Human Resource Management (X3) and Quality Management (X4). Indicators of institutional support included institutional policy, social characteristic, work atmosphere, infrastructure availability, and program development. Indicators of facility management were office facility, working facility, planning of facility requirement, utilization, and controlling. Human Resource Management had indicators of task and
responsibility, organizational structure, HR planning, acting, and controlling. Quality management was reflected from the indicators of task and function, services, planning, coaching, and controlling. Data used in this study consisted of primary and secondary data. Primary data were directly collected from respondents by using questionnaire and in-depth interview. The primary data included: agricultural extension institution, available facility, human resource management, and quality management. Secondary data were the data obtained from data recording available in Local Government offices and related institutions in research location. Research instrument used in this study was in the form of questionnaire. Questionnaire consisted of list of questions about certain topic asked to the subject of research, both individual or group, to obtain certain information such as the characteristic of extension worker, training process, environmental factor of extension worker, supporting factor of extension activity, and performance level of extension worker. The result of questionnaire was converted to numbers, statistical analysis, also essay and conclusion of study result. The result of validity and reliability test on research instruments showed that instruments were valid and reliable. The technique of data analysis applied in this study included the analysis of descriptive statistics and inferential statistics, i.e. path analysis. Moreover, SWOT analysis was performed to formulate the strategy for the development of Agricultural Extension Office as a knot for coordinating agricultural development in the subdistrict.

3 RESULT AND DISCUSSION
The ebb and flow of extension institution occurs due to regulation that changes continuously. The report written by [3] showed that existence value of extension institution in Sukabumi Regency was relatively good. However, it was found that all aspects that characterized extension institution were degraded as a result of changes in the nomenclature of extension institution and structural system at the end of 2017. Hence, agricultural extension institution became a part of technical institute with a tendency to be dependent on the project of local government. According to the result of field observation, both positive and negative impacts appeared after extension institution joined the technical service. Positive impact was in the form of a relatively better coordination of extension workers as field executor by reason of one instruction in addition to another factor, namely the cutting of bureaucracy that has always been a sectoral ego. Furthermore, the negative impact was that agricultural extension activities were no longer a priority. However, this situation is expected to create a better agricultural extension institution which facilitates capacity building of farmers [4, 5] and attracts young farmer to actively develop agricultural sector [6, 1, 7, 8].

3.1 Factors Affecting Quality Management of Agricultural Extension Office
Result of observation indicated that external factors tended to affect the role and coordination of agricultural extension workers in the implementation of task and function of institution. Today, Agricultural Extension Office (Balai Penyuluhan Pertanian) is an institution facilitating agricultural extension workers at the subdistrict. That organization is a place where people will be able to find their position to complete their task. Moreover, he also added that the definition of organization will continue to develop, starting from organization is a structure, function, and relation to such advanced definition of a process, also a system [9]. That institution is a collective agreement (norms) and the principle of rules that form the standard of individual or group behavior accepted by the society. It also distinguished between the concept of institution as norms and principles that determine organization and organization as a facility that operationalize the norms and principles [10].

Institution is basically viewed from two sides. First, institution as software or rules of the game that regulates interdependence, both between individual, community group, condition, and situation, such as science and technology. Second, institution as hardware, that is an organization that covers the rules [1]. Therefore, it is believed that if one system is not working in the implementation of task and function, Agricultural Extension Office will not work optimally [4]. Hence, multiple linear regression at confidence level of \(\alpha = 5\%\) (0.05) was performed to investigate the factors affecting the implementation of task and function in Agricultural Extension Office located in Sukabumi Regency. Result of statistical test to observe the effect of institutional support, facility management, and human resource management on quality management of the implementation of task and function showed a coefficient of 0.893, while simultaneous effect of exogenous variables on endogenous variable was indicated by the value of R square amounted to 0.798 or 79.8%. This result denotes that institutional support, facility management, and human resource management simultaneously affected the determination of quality management as factor resulted in the main effect in the implementation of institutional task in the Agricultural Extension Office in Sukabumi Regency of 89.3% with determination level of 79.8%, while the rest of 11.2% was determined by factors aside from the variables analyzed in this study. Result of this study was in line with the observation and in-depth interview with several extension workers. It was found that extension workers were able to perform their task function properly and work without pressure since the components involved in the management of Agricultural Extension Office provided convenience and adequate facility in supporting the implementation of task of agricultural extension workers. In term of institutional support, Agricultural Extension Office in Sukabumi regency was found to have a complete organizational structure, from the Head of Office, Supervisory Division, and the Division of Program and Evaluation. Moreover, there was also sufficient financing for operational purpose. Also, the Local Government via the Agricultural Service of Sukabumi Regency continued to allocate operational fund in addition to the fund sourced from the Central Government. Good asset management in every Agricultural Extension Office involves an organized facility management in implementing the function and task of Agricultural Extension Office. This situation was seen in the equal distribution of operational facility (vehicle) to all extension workers, regardless of their status (civil servant or daily worker), yet different type of vehicle distributed to
different status of extension worker. Furthermore, Distribution of Operational Fund for Extension Workers (BOP) was relatively on time and various teaching aids used in the process of agricultural extension were well-maintained. In the aspect of human resource development, there was equal distribution of extension workers participating in the academic and training program, both from local and central government. Almost all government extension officer (civil servant) had already obtained certificate of agricultural extension specialist, skilled agricultural extension officer, or agricultural extension officer of group-transfer besides other technical training. Moreover, daily workers were simultaneously involved in technical training and empowerment. However, the process to involve self-help extension in term of capacity building was not programmed well, thus there were only several people participated in such program. In sum, capacity building should be increased, particularly concerning human resource of self-help extension workers, both concerning the method and empowerment as recommended [11]. Based on the result of statistical analysis and observation, quality management in the implementation of task and function in Agricultural Extension Office in Sukabumi Regency has been working properly. There were only several items of human resource management that required improvement, while facility management and institutional support were already of optimal condition. Moreover, the rest of 11.2% that also affected quality management in the implementation of task, function, and work coordination was caused by factors excluding the three variables of institutional support, facility management, and human resource management, that was revealed during interview with extension workers, namely the factor of leadership of the Head of Agricultural Extension Office that tended to be situational, either it was task oriented or relationship oriented at times.

3.2 The Model of Factors Determining Work Coordination in Agricultural Extension Office

Despite the fact that the three variables were found to have a simultaneous and strong effect on the quality management in the implementation of task and function of Agricultural Extension Office, each variable obtained different value of path coefficient. Based on the analysis performed on each correlation between variables as presented in Table 1 that was applied to test hypothesis as follows: H₁: There is correlation between variables and H₀: There is no correlation between variables. Test was performed at significance level of 5% (α = 0.05), with criteria of: H₁ is accepted if sign.level ≤ α and H₀ is rejected if sign.level > α. Based on the result of statistical analysis listed in Table 1, it was found that all variables had positive correlation, following the result of previous analysis, which proved that the synergy of coordination between institutional support, facility management, and human resource management will result in positive impact on the development of quality management in the Agricultural Extension Office as a know for coordinating agricultural development in the subdistrict. The more synergized the coordination, the more qualified the quality management and the implementation of activities related to agricultural extension. Moreover, F-test was also applied to prove that three variables simultaneously affected the quality management. Result of ANOVA showed path coefficient of 42.094 at significance of 0.000, indicating that the three variables directly affected quality management in the

<table>
<thead>
<tr>
<th>No</th>
<th>Description</th>
<th>t-value</th>
<th>Sign</th>
<th>α</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Correlation between X₁ and X₂</td>
<td>0.713</td>
<td>0.000</td>
<td>0.05</td>
<td>H₁ is accepted</td>
</tr>
<tr>
<td>2.</td>
<td>Correlation between X₁ and X₃</td>
<td>0.687</td>
<td>0.000</td>
<td>0.05</td>
<td>H₁ is accepted</td>
</tr>
<tr>
<td>3.</td>
<td>Correlation between X₁ and X₄</td>
<td>0.814</td>
<td>0.000</td>
<td>0.05</td>
<td>H₁ is accepted</td>
</tr>
<tr>
<td>4.</td>
<td>Correlation between X₂ and X₃</td>
<td>0.674</td>
<td>0.000</td>
<td>0.05</td>
<td>H₁ is accepted</td>
</tr>
<tr>
<td>5.</td>
<td>Correlation between X₂ and X₄</td>
<td>0.776</td>
<td>0.000</td>
<td>0.05</td>
<td>H₁ is accepted</td>
</tr>
<tr>
<td>6.</td>
<td>Correlation between X₃ and X₄</td>
<td>0.847</td>
<td>0.000</td>
<td>0.05</td>
<td>H₁ is accepted</td>
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</tbody>
</table>

Agricultural Extension Office. Based on the results of statistical analysis, the values of path coefficient obtained were as follow: X₁ to X₃ of 0.457, X₁ to X₄ of 0.314, X₁ to X₂ of 0.171, X₂ to X₃ of 0.474, and X₃ to X₄ of 0.645. Therefore, on the basis of path coefficient (ρ), coefficient of correlation (r), and coefficient of error (€), the path diagram is depicted in Figure 1.

Based upon the result of partial analysis for each variable of institutional support and facility management on human resource management using t computes, it was found that the variable of institutional support to quality management obtained t computes (2.253) > t table (-1.692) or significance value of 0.031 < 0.05 and facility management to human resource management obtained t computes (1.550) or significance value of 0.131 > 0.05, with testing criteria at significance level of 95%, i.e. if t table ≤ t computes ≤ t computes, thus Ho is accepted or If t computes < t table or t computes > t table, thus Ho is rejected or according to significance, If significance > 0.05, Ho is accepted and If significance < 0.05, Ho is rejected. This result shows that the variable of institutional support directly affected human resource management, while facility management did not have direct effect on human resource management. This was inline with the result of observation in which institutional support had stronger effect on the development of task and function, operational financing, and regulation that provided such environment enabling human resources in Agricultural Extension Office could work without pressure and productive in performing their tasks and functions. Moreover, facility management did not have direct
effect on human resource management since facility management focused on providing convenience, ensuring physical security, and fulfilling standards. Therefore, individual needs in the Agricultural Extension Office in Sukabumi Regency were at a higher level of satisfaction, more to the needs for self-actualization and self-esteem than social, security, and physiological needs. This reflects that the management of Agricultural Extension Office has reached a modern and conducive level where basic needs of each individual has already fulfilled in implementing their own task and function. Different result was shown by the three variables of institutional support, facility management, and human resource management on the quality management of Agricultural Extension Office, in which the result of each partial test by t-test found that the variable of institutional support did not have direct effect on quality management, while direct effect was found in the other two variables as resulted from the t-test that $t_{compute} (1.162) < t_{table} (-1.692)$ or significance level of 0.254 > 0.05 for institutional support to quality management, while the effect of the other two variables of facility management and human resource management to quality management was reflected by the value of $t_{compute} (3.328) > t_{table} (-1.692)$ or significance level of 0.02 < 0.05 and $t_{compute} (5.494) > t_{table} (-1.692)$ or significance level of 0.00 < 0.05, respectively, with similar criteria applied in the partial test. Hence, both variables directly affected quality management in the Agricultural Extension Office. Direct effect of facility management and human resource management on quality management indicated a good condition of knot for coordinating between actors and institutions involved in the activity in the subdistrict concerning agricultural development at the level of subdistrict due to available facility supported by adequate human resource, thus the formation process of quality management in the Agricultural Extension Office was relatively faster. Apart from the absence of direct effect of institutional support on quality management, such problems were not found, particularly in the institution engaged in extension sector in Sukabumi Regency. This situation was resulted from the establishment of Extension Office which facilitates agricultural extension as stated in Law on Extension System for Agriculture, Fisheries, and Forestry No. 16 of 2006. Thus, it is relevant that institutional support is considered normal and not a major problem. Based on the description, the fit model of path analysis for this case is presented in Figure 2.

3.3 Strategy to Develop Agricultural Extension Office as a Knot for Coordinating Agricultural Development in the Subdistrict

Based on the result of in-depth interview and focus group discussion with extension workers, it is known that weak coordination between lines in the Agricultural Extension Office was due to many factors, both internal and external factors. Internal factors tended to cause the weakness or ineffectiveness of coordination and integration in the Agricultural Extension Office in Sukabumi Regency included:

1. Different orientation between extension workers. Government extension officers (civil servant) were more oriented to tasks that directed daily extension workers (THL-TBPP) with only a little implementation, while daily extension workers were more oriented to complete the tasks given by the government officers who acted as superiors, and self-help extension workers were more oriented to volunteerism and awareness;
2. All extension actors have not understood extension paradigm as outlined in the law of extension;
3. The absence of facility or autonomous dialogue forum that could accommodate and become such discussion room and cooperation between extension workers at subdistrict level;
4. Low appreciation from extension actors to fellow extension workers;
5. Weak understanding of extension workers to the principle of agribusiness based agricultural development;
6. In average, the old age of government extension officers became barriers to coordination; and
7. The status of contract extension workers for daily THL with mobile work areas also become an obstacle concerning the extension program continuity;

However, despite the weakness, there are also strength (positive values) from the internal factors, namely:

1. Regular meeting was held at the level of regency and subdistrict, both meeting of extension workers and meeting of the actor of agricultural development;
2. Extension officers obtained a relatively high education degree, mostly bachelor’s degree;
3. Increasing ownership and comprehensive knowledge of communication media (particularly cell phone) by extension workers and community;
4. The existence of agricultural extension administrative office at subdistrict level;
5. Cooperation between extension workers in the field has been established, especially concerning demplot (demonstration plot);
6. Intensive contact between extension workers during the meeting for preparation and synchronization of empowerment programs at subdistrict level;
7. Training of facilitation and development of communication network through internet application; and
8. The deliberation of village development (musyawarah pembangunan desa) was finally held again, both at the level of village and subdistrict.

Moreover, external factors tended to influence the weakness or ineffectiveness of coordination of agricultural development in the subdistrict were as follow:

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**Fig. 2. Path diagram of variables with direct effect**
1. Unintegrated scheme of agribusiness development in the subdistrict, both within sector or between sectors; 
2. The leaders at the level of subdistrict and village were found to still partially understand the position, role, and function of extension institution, thus they were less likely to provide breakthrough and alternative solution for the effectiveness of coordination; 
3. Discontinuity of agricultural development programs (project), hence terminating the cooperation established; 
4. Complex bureaucracy; 
5. The culture of positive cooperation in the management of development program or project was not common, thus it is not “how to empower farmers” but “how to gain maximum profit by deceiving farmers”;
6. As reported by extension workers and the local community, geographic condition of Sukabumi Regency with hills and mountains hindered the mobility of extension actors, particularly the local self-help extension workers; and 
7. The meeting between agricultural development actors in village was not yet intensive and effective. Thus far, meeting at the level of regency and village was only held when there was program of deliberation of village development. 

The result of in-depth interview and focus group discussion revealed several opportunities for the actualization of coordination and integration regarding the external factor, namely: 
1. Increase in farmer empowerment program offered by the central, provincial, and regency government; 
2. The development of participatory research and participatory extension method, thus opening such opportunities for all parties to participate, such as the program of production increase for rice, maize, and soybean enforced by the Ministry of Agriculture; and 
3. Mainstreaming of participatory planning and management approach in local development. 

Compared to the external factor, internal factor was found to have great effect on the strength and weakness of coordination and integration of agricultural development in the subdistrict. Except for the main external factor of government facilitation, the rest was determined by awareness, opportunity, willingness, and capability of extension actors. Regulation for coordination is indeed necessary, but independence should be taken into consideration because independence is a form of empowerment [12]. Its tendency is in line with technological development and revitalization of extension institution, therefore it is the time for agricultural extension to be driven by younger, more creative, innovative and networked people [13]. Increasing integration and coordination of agricultural development in the subdistrict is not an easy task, considering the existence of agricultural extension that continues to fluctuate as a heart rate, up and down. Hence, strategy is required particularly when extension is in its lowest point to at least still be able to provide solution to effectively empower farmers to be independence. Referring to the analysis approach as described in the methods, the strategy was formulated through SWOT analysis presented in Table 2.
Based on the analysis of SWOT matrix above, several strategies were formulated to further be implemented in order to increase the effectiveness of Agricultural Extension Office as a knot for coordinating and integrating agricultural development in the subdistrict:

**TABLE 2**

<table>
<thead>
<tr>
<th>Internal Factors</th>
<th>Strength</th>
<th>Weakness</th>
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<tbody>
<tr>
<td>1. Regular meeting at the level of regency and subdistrict; 2. High education degree of extension officers; 3. Increase in ownership and comprehensive knowledge of communication media; 4. The existence of agricultural extension administrative office at subdistrict level; 5. Established cooperation between extension workers in the field; 6. Intensive contact between extension workers; 7. Training of facilitation and development of communication network through internet application; 8. Reactivating of the deliberation of village development (Musrenbangdes)</td>
<td>1. Different orientation between extension workers; 2. All extension actors have not understood the new extension paradigm 3. The absence of facility or dialogue room; 4. Less appreciation; 5. Weak understanding to agricultural development; 6. The age factor; and 7. The status of contract extension worker (THL-TBPP).</td>
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**External Factors**

<table>
<thead>
<tr>
<th>Opportunity</th>
<th>Strategy A</th>
<th>Strategy B</th>
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<tbody>
<tr>
<td>1. Increase in farmer empowerment program; 2. The development of the method of participatory extension research; 3. Mainstreaming of participatory planning and management approach in local development.</td>
<td>1. Functioning Agricultural Extension Office as joint secretariat; 2. Activating the deliberation of village development (musrenbang) at the level of subdistrict and village as forum to coordinate the management of agricultural development; 3. Increasing innovation, number of demplot (demonstration plot), frequency of discussion, training, and participatory research at village level, and 4. Optimizing the role of young extension workers and utilizing ICT for coordination effectiveness.</td>
<td>1. Set the regulation of agricultural extension as the base of orientation and paradigm of extension; 2. Establishing and activating extension office in the regency as a mandate of the regulation of agricultural extension, also to facilitate extension workers to reach a mutual agreement (rules of the game); 3. Develop partnership and collaboration of the role and task among extension actors.</td>
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<tr>
<th>Threat</th>
<th>Strategy C</th>
<th>Strategy D</th>
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<tr>
<td>1. Unintegrated scheme of development model; 2. The leaders at the level of subdistrict and village still have partial understanding of extension institution; 3. Discontinuity of agricultural development programs (project); 4. Complex bureaucracy; 5. Culture of cooperation is not yet a common habit; 6. Geographic condition of Sukabumi Regency with hills and mountains; and 7. Unintensive and ineffective meeting between agricultural development actors in village.</td>
<td>1. Functioning the field and Agricultural Extension Office as a dialogue room and a joint laboratory for training and research; 2. Increasing the establishment of cooperation with any institutions involved in extension activity.</td>
<td>Giving a role to the village government and local institution (youth organization/karang taruna, Islamic boarding school/pesantren, etc.) as a motor of extension and agricultural development.</td>
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</tbody>
</table>
1. Functioning Agricultural Extension Office as joint secretariat for government, self-help, and private extension workers.

2. Activating the deliberation of village development at the level of subdistrict and village as forum to coordinate the management of agricultural development. Thus far, deliberation was only held during the planning of development program, there was no meeting during organizing, implementation, monitoring, and evaluation of program.

3. Increasing innovation, the number of *demplot* (demonstration plot), frequency of discussion, training, and participatory research at village level. This approach is highly possible to apply since each village is basically a working area for agricultural extension workers.

4. Optimizing the role of young extension workers and utilizing ICT for coordination effectiveness.

5. Setting the regulation of agricultural extension as the base of orientation and paradigm of extension. As explained in the regulation of agricultural extension, the orientation and paradigm of extension is to empower weak farmers.

6. Establishing and activating extension office in the regency is mandated by the regulation of agricultural extension, also to facilitate extension workers to reach a mutual agreement.

7. Developing partnership and collaboration of the role and task among those involved in extension activity, thus all parties may complement each other and share any excess resources, innovation, and technology.

8. Functioning the field and Agricultural Extension Office as a dialogue room and a joint laboratory for training and research.

9. Increasing the establishment of cooperation with the center of innovation, research institute, company, and higher education for the development of sustainable joint program.

10. Giving a role to the village government and local institution (youth organization/*karang taruna*, Islamic boarding school/*pesantren*, etc.) as a motor of extension and agricultural development in the subdistrict.

### 4 CONCLUSION

Result of the study concluded that factors of institutional support, facility management, and human resource management altogether affected quality management in the implementation of task and function of Agricultural Extension Office in Sukabumi Regency. Institutional support was found to be the only determinant that did not directly affect the work coordination in the Agricultural Extension Office of Sukabumi Regency. The strategies that are possible to be applied to increase the effectiveness of Agricultural Extension Office as a knot for coordinating and integrating agricultural development at subdistrict level include: 1) Functioning Agricultural Extension Office as joint secretariat for government, self-help, and private extension workers, 2) Strengthening the function of deliberation at the level of subdistrict and village as forum to coordinate the management of agricultural development, 3).

Increasing innovation, the number of *demplot* (demonstration plot), frequency of discussion, training, and participatory research at village level by optimizing the role of young extension workers and utilizing ICT for coordination effectiveness, and 4) Establishing partnership and collaboration of the role and task among those involved in extension activity, thus all parties may complement each other and share any excess resources, innovation, and technology besides functioning the field and Agricultural Extension Office as a dialogue room and a joint laboratory for training and research.

### REFERENCES


