The existing and expectations of BPP capacity in the strategic command for agricultural development program

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Abstract. The focus program of the Ministry of Agriculture in 2019-2020 is the strategic command for agricultural development (KOSTRATANI), stated in the Minister of Agriculture No./Kpts/OT.050/I/02/2020. The expectations and targets to be achieved from BPP as KOSTRATANI are (1) data and information; (2) the agricultural development; (3) learning; (4) agribusiness consulting; and (5) partnership networks. To meet the expectation, research to know the capacity of BPP should be done. This paper presents information on the capacity of BPP (human resources, infrastructure and management). The research was conducted in Central Java Province, focused on BPP in Grobogan District, especially BPP in Pulokulon and Tegowanu Subdistrict. The research was done through a survey during March 2021, the data and information were collected based on group discussion and individual interview with total respondents of 31, then analyzed descriptively. Found that the human resources capacity at province level were only supported by 16% of extension officer. At subdistrict level, an extension officer responsible for 3-4 villages while at Tegowanu 4-5 villages. The infrastructure of Pulokulon was worse than Tegalwanu and Both BPP have some program out side the main responsibility as BPP. Concluded that KOSTRATANI should not be implemented in all BPPs simultaneously. The Ministry of Agriculture would decide which certain BPP is considered the appropriate mode for implementing KOSTRATANI. Therefore, suggested that further research on the capacity of more BPP with more samples with special characteristics such as agroecosystem and main commodity should be conducted.

1. Introduction
The national food improvement and fulfillment program to encourage community food security remains the focus of the Ministry of Agriculture's program. The last program that emphasis on the success of various agricultural development were starting at the subdistrict level, called the Strategic Command for Agricultural Development (KOSTRATANI) which was established through the Minister of Agriculture Regulation No. 49 of 2019 and the Decree of the Minister of Agriculture No. 13/Kpts/OT.050/I/02/2020 [1]. In the KOSTRATANI Program, the position of the Agricultural Extension Center (BPP) is the node and center of activity.

Machmur et al. [2] explained that in its movement, KOSTRATANI optimizes the duties, functions, and roles of BPP by aligning the progress of the industrialization era 4.0 especially related in the data and information center through Agriculture War Room (AWR). KOSTRATANI plays five strategic
roles namely, as a data and information center, a center for the agricultural development movement, a learning center, an agribusiness consulting center, a partnership network development center. 

As a data and information center for the community, BPP KOSTRATANI can provide information on regional potential, agricultural technology as well as market information. As a learning center, BPP KOSTRATANI is intended for extension workers, farmers, and Gapoktan or the union of farmers’ group to farmers in the village to increase knowledge and skills of agricultural as human resources. As an agribusiness consulting center, BPP KOSTRATANI should act as an agribusiness consulting secretariat for farmers to the private sector to increase agricultural businesses on a business scale. Likewise, the role of BPP KOSTRATANI as a center for the development of cooperation networks. The KOSTRATANI Brigade will provide access and information, so that cooperation can be formed in the agricultural sector. Starting from access to capital to other business partnerships, which of course require a network of cooperation to grow on a business scale.

However, based on data released by Agricultural Extension Center [3], the number of subdistricts in Indonesia until 2020 reached 7,230. However, there are 5,733 subdistricts already have BPP and other BPP (1,497) have no BPP. Based on their status, out of 5,733 BPPs have self-owned status and the other 612 are leased. Of these 5,773 BPPs, there are 4,365 BPP units in good condition, while there are 1,368 other BPPs in damaged condition. These number actually showed that not all BPP could be functions as KOSTRATANI models or impossible could be function as KOSTRATANI.

In addition to the number and existence of existing BPPs that are not evenly distributed in all subdistricts and some of the BPP conditions are in a damaged condition, there are also several challenges in implementing agricultural development programs through KOSTRATANI. Rusmono [4] reported the challenges of implementing KOSTRATANI such as (1) human resources at BPP are limited in terms of technical and management capabilities; (2) inadequate infrastructure and facilities; (3) various local government support and attention; (4) program coordination and synergies have not yet been established in the unity of the movement; (5) harmonization of central and regional regulations have not been operated well.

With this existing condition, the framework for optimizing the tasks, functions, and roles of BPP is still faced with the diversity of BPP conditions in various locations so that the ideal concept to push into a BPP transformation model that supports the KOSTRATANI framework as well as being five activity centers in the subdistrict still needs to be reviewed for readiness. This paper aims to describe the results of the analysis of the existing condition of BPP, especially in Grobogan District concerning its readiness to become a node for the implementation of the Constituent Movement programmed by the Ministry of Agriculture nationally.

2. Materials and methods

2.1. Materials

The research was conducted in Central Java Province. Therefore, the location selection was based on the results of discussion with the head and staff of the Central Java Provincial Agriculture Office and Assessment Institute for Agricultural Technology or Central Java Research Center and Agricultural Technology. Based on the results of discussions at the provincial level, Grobogan District was selected as the research location because Grobogan District has the potential as a major and strategic food production location inlude rice, corn and soybeans. There are various national agricultural development program activities being implemented in the BPP.

Respondents at the district level was consist of the head of the office and some staffs at the Agriculture Service of Grobogan District, PSP, and Extension Sector. Respondent at subdistrict level were BPP Pulokulon and Tegowanu, include the BPP coordinator and the extension workers in the two BPP, the head of the farmers group, farmers, traders, village heads in each area of the BPP. The total number of respondents in this study was 31.
2.2. Methods

Data and information were collected refer to a structured questionnaire carried out through group discussions and individual interviews that focused on the implementation of the KOSTRATANI Program including focused to the capacity of BPP namely the human resources, infrastructure and the management. Data and information were analyzed qualitatively refer to Bernard et al. [5] which define “Qualitative data analysis methods as an analysis of documented information in the form of texts, media, or even physical items as well as based on the research questions responses”.

3. Results and discussion

3.1. The capacity of human resources in Balai Penyuluhan Pertanian (BPP)

The human resources in BPP are consist of the BPP coordinator, the agriculture extensions and the administration staffs. At province levels, was found that not all subdistrict has a BPP (Table 1) because there are only 538 out of 576 (94%) subdistrict which has BPP. Grobogan District consists of 19 subdistricts, each of subdistrict has a BPP serving 280 villages meaning a BPP serves 14,7 villages. To carry out these duties, BPP is assisted by 30 staffs of agriculture extensions from government employees and 40 honorarium staff for agricultural extension assistants who are part of 11,590 spread out in Indonesia who were processed as PPK (Pegawai Pemerintah dengan Perjanjian Kerja) or Government Employees with a Work Agreement to help the duty of agricultural extension [6].

Table 1. The number of BPP, extension workers, poktan and gapoktan in the Province of Central Java, Grobogan District, Pulokulon and Tegowanu Districts based on data for the period 30 June-30 December 2020 [3].

| No | Category                      | Cebtral Java Province | Grobogan Subdistrict | Agricultural Extension Center (BPP) Pulokulon Subdistrict | Agricultural Extension Tegowanu Subdistrict |
|----|-------------------------------|-----------------------|----------------------|----------------------------------------------------------|------------------------------------------|
| 1  | District                       | 35                    | -                    |                                                          |                                          |
| 2  | Subdistrict                   | 576                   | 19                   |                                                          |                                          |
| 3  | Agricultural Extension Center (BPP) | 538                   | 19                   |                                                          |                                          |
| 4  | Extension staffs              |                       |                      |                                                          |                                          |
|    | Government employees          | 1,863                 | 33                   | 2                                                        | 3                                        |
|    | Non- Government employees     | 7,306                 | 174                  | 2                                                        | 1                                        |
| 5  | Total                         | 9,169                 | 207                  | 4                                                        | 4                                        |
| 6  | Villages                      | -                     | 280                  | 13                                                       | 18                                       |
| 7  | Farmers groups                | 57,246                | 1996                 | 146                                                      | 67                                       |
| 8  | Union of Farmers groups       | 8,225                 | 280                  | 13                                                       | 18                                       |

At Pulokulon Subdistrict, an extension officer have to responsible 3-4 villages of 34 farmers’ groups, while at Tegowanu 4-5 villages with 17 farmers groups. Actually, a village under BPP at least should has one agricultural extension officer, therefore farmers have un-auged services from extension officer. This fact was also considered by the coordinator of BPP because there is a BPP coordinator who headed more than one BPP. To carry out BPP’s duties, currently in Grobogan, there are 150 independent agricultural extension agents who assist farmers. In terms of quality, the majority of PPLs are of old age where, with the provision of training on administration and introduction to information technology, they are not able to follow. The unadequate of human resources in BPP was also reported by Lamm et al. [7] reported that most farmers have not get enough agricultural information from extension programs,
instead they get information from their neighbor for sharing agricultural knowledge since they usually meet at their field.

Qualitatively a PPL could not perform their best services to farmers, because beside the limited number of the PPL, they also have to do some extension workers being assigned as structural and administrative staff at the district agriculture office. In fact, these limited number of extension workers will decrease in the next two to three years because some officer will enter their retirement period. In terms of quantity, the quality was also not adequate. The workshop and training were carried out but the majority of PPLs were old therefore they found difficulties to implement the training materials. Meanwhile, the KOSTRATANI have to provide all update data at anytime. Sari et al. [8] stated how important is Information and Communication Technology (ICT) for rural development. Additionally, Loveline et al. [9] reported that the unadequate quantity and quality of extenesion were resulted at the de
delivery services, organisation of field days, farm visit by extensionagents not effective and only field meetings with farmers is just 30.3% effective [10].

3.2. The capacity of facilities and infrastructure in BPP, and management
Most of Grobogan District territory is paddy fields and dry fields. The dominance of this agricultural potential makes the Grobogan District a major center of rice production in Central Java province and nationally. In addition to rice commodities, the Grobogan District area is also a national soybean production center and the Central Java Province, so that this district is designated as a pilot area for the national soybean corporation model (PAJALE). The Grobogan variety is one of the superior soybean products which has been used as a source of soybean seeds in various locations in the national scope.

The above variation or agriculture zone makes varies the infrastructure that support BPP activities in Grobogan District. Information obtained from two BPP respondents or research locations (BPP Pulokulon and Tegowanu), shows that the building was not built on BPP land, but with the status of usufructuary rights. To support the KOSTRATANI activities especially in data and information, not all BPP receive support but from 19 BPP only 6 BPP received equipment assistance (three BPP get complete IT) consisting of computers and drones (BPP Tegowanu, Godong, and Ngaringan). While three other BPPs only received computer assistance (Toroh, Kradenan, and Pulokulon). That BPP Tegowanu has received computer and drone could be seen in Table 2, while BPP Pulokulon has no drone and have a damage printer.

The system of providing facilities adopted by KOSTRATANI, from one side is in line with the findings of Sabir et al. [11] where the public sector will be effective if it is supported by facilities and training and advocacy compared to the private sector which has more capital but does not provide sufficient guidance. While strangely, in the KOSTRATANI program, some area was only given technical facilities and some are only coaching/training while both need facilities of the properties and training in synergy. Other important findings were reported by Ambaye et al. [12] that the implementation of the cyber extensions need a strategis area to operate, therefore area with better internet connection would be more appropriate.

With these facilities BPP Tegowanu is classified as an advanced BPP which may could be responsible to be the BPP KOSTRATANI therefore has been pushed towards BPP transformation. Meanwhile BPP Pulokulon which has potential prospect for the agricultural production development were still lacked behind from technological support.
Table 2. Facilities at BPP Pulokulon and Tegowanu.

| No | Facilities       | Pulokulon | Tegowanu |
|----|------------------|-----------|----------|
|    |                  | Unit | Status  | Condition | Unit | Status  | Condition |
| 1  | Office           | ± 40 m² | Land for rent | Good | ± 64 m² | District authority | Good |
| 2  | Demonstration Land | ± 800 m² | Land for rent | Good | - | - | - |
| 3  | Laptop           | 2      | APBD II | Average | 2      | APBD | Average |
| 4  | Printer          | 2      | APBD II | Damage | 2      | APBD | Average |
| 5  | Dekstop          | 1      | APBN    | Good | 1      | APBN  | Good |
| 6  | Projector        | 1      | APBD I  | Good | 1      | APBN  | Good |
| 7  | Drone            | -      | -       | - | 1      | APBN  | Good |

3.3. The capacity of management in BPP

The BPP management activities are related to the available budget, especially structurally related to district agricultural activities of the Department of Agriculture, which are designed and budgeted for each fiscal year. Most of the budgeting portion for the activities of the Department of Agriculture comes from district budget funds. Although agricultural activities are also carried out based on the allocation of funds from the Provincial APBD and APBN through DAK, co-administration tasks or through agricultural development programs from the Ministry of Agriculture. In the process of preparing agricultural activity plans and programs and their budgeting, it is very much determined based on the available district budget allocations and the decisions of the regent and approval in the district parliament. From this process, it is not uncommon even though the agricultural sector, which is the dominant program carried out by the community, does not get an optimal portion of the activities funded by the APBD compared to other sectors. Not infrequently some of the proposed program plans from the BPP to the District Agriculture Office were not responded to as district priority activities, so that many district agriculture service programs could not be realized.

The potential development of the agricultural sector in Grobogan District has not been proportional to the allocation of APBD funding for the implementation of its development. To support agricultural activities in Grobogan District apart from the APBD, also from DAK activities and allocations through the central agricultural program. Funds from the center that go to the district are non-physical DAK worth Rp10 million per BPP, and the PATB program for food commodities (rice, corn, and soybeans). Programs from the technical Directorate General (echelon 1) are managed by each sector (food, horticulture, animal husbandry, plantations, PSP).

Activity plan, agricultural corporation for corn in cooperation with BPR BKK. The concept is that production costs are covered by BKK, marketing to Comfeed. Office targets is to increase in food production and increase group capacity. Verval fertilizer, extension activities related to farmer cards. In this activity, the extension worker must input 14,000 data per month without any additional salary. All the above information confirm with [13] findings about inadequate networking between agricultural program and farmer extension problems, lack of coordination and communication between the agricultural sector and higher education institutions, and lower salary levels as well as facilities for agricultural extension workers.

Grobogan is a rice center with the largest fertilizer user in Indonesia. According to BPN, the area of standard rice fields is 90,000 ha, while the existing one is estimated at only 82,000 ha. Grobogan is also a center for corn and soybeans. Currently, farmers in Grobogan are encouraged to use a 4-wheel tractor machine and take advantage of the pipeline program and avoid using the Combine Harvester. BPP encourages the use of the above machineries to be carried out in collaboration with Village-Owned Enterprises (BUMDES) or build partnerships.

Each BPP has a specific program following the provisions of the district office, the plans and programs, and implementation of activities BPP Grobogan District in 2020 and 2021, each has 9 activities as follows. The kinds of BPP Pulokulon are onion plot demonstration, sweet corn plot...
demonstration, KRPL assistance, product processing development, PPS empowerment, PPS empowerment, development of seed breeders, capacity building for seed breeders. The kinds of BPP Tegowanu are facilitation, Directorate General of PSP, Regional Government, accompaniment, farmer’s card, price information, consultation related to farming, partnership, and data center.

These activities illustrates how a limited number of extension workers must allocate time to carry out these tasks. To do the responsibility of BPP, some of the main tasks of extension workers in Grobogan District are currently mainly related to administration, namely compiling CPCL, farmer cards, making e-RDKK based on Simluh, compiling Simluh, and compiling programs. The above tasks take quite a lot of time and energy so that time and energy as farmer assistants, agricultural technology introduction agents, and later are burdened with reporting tasks, ranging from UPSUS to KOSTRATANI.

4. Conclusions
Empirically, the existing conditions show that the capacity of BPP is different in terms of human resources (quantity and quality of PPL), infrastructure (availability of office conditions, access on information technology and management related to the program that should be implemented from the national level. This fact indicates that there will be a gap between the existing conditions and the expectations of tasks and functions of BPP compare to the expectation of KOSTRATANI functions that have been set by the Ministry of Agriculture through.

KOSTRATANI should not be implemented in all BPPs simultaneously, but in steps according to their capacity. Based on the variations, it is hoped that the Ministry of Agriculture would decide which certain BPP is considered the appropriate for implementing KOSTRATANI. Since the samples of the research still limited, suggested that further research on the capacity of more BPP with special characteristic such as agroecosystem and main commodity should be conducted. Beside these, it is very importance of paying attention to the fate of agricultural extension workers and the needs of farmers is because both have an important role in agricultural development which is recognized by the government as the spearhead of determining national food sufficiency and security.

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