Study of rice seed certification at the Gorontalo Province seed certification supervision center

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Abstract. This research aimed to determine the management system of rice seed certification in the Seed Certification Office at Gorontalo Province and determine the obstacles of the system. This research was conducted at Gorontalo Seed Center. The research applied survey design. There were 4 informants in this research. The procedures of rice seed certification system at the seed certification office are as follow: applications for food crop certification, verification of seed source, inspection of field, plant isolation and harvest equipment, seed sampling and quality testing, labelling and issuance seeds contains high level of water and low physical quality, it can be reprocessed to be re-sampled. If it does not pass seed germination test, then the existing samples can be retested without taking samples in the field.

1. Introduction
Indonesia is known as an agricultural country because it has a wealth of natural resources, especially agricultural products, with the majority of the population working as farmers and because they have productive land for farming. This country benefits because it is blessed with supportive natural conditions, namely a large expanse of land, abundant biodiversity, and a tropical climate where sunlight occurs throughout the year so that it can plant all year round. Most of the agricultural land in Indonesia is planted with rice, this is because rice is the staple food source of the Indonesian population. Rice or rice plays a role as a commodity that has high economic value, therefore increasing rice production is attempted to support food security which is a top priority for development in Indonesia with the initial step of providing superior seeds (Praspekti, 2015).

Seed is one of the main components that plays an important role in increasing the quantity and quality of rice production, therefore the use of high quality (label) seed varieties is highly recommended. This is related to the characteristics possessed by superior varieties, including: high yield, resistance to pests, and delicious (fluffier) taste of rice. Factors that influence rice seed production, namely the availability of high-quality superior seeds for farmers in carrying out farming activities are an important requirement in increasing yield and quality of production (Soetopo, 20013). The use of certified superior seeds is one of the efforts to increase rice production in Indonesia. The difference between certified seeds and
uncertified seeds is for certified seeds which in the production process apply certain methods and requirements in accordance with the provisions of seed standards, both in the field and laboratory, which are supervised by the Sub Direktorat Pembinaan Mutu Benih Balai Pengawasan dan Sertifikasi Benih (BPSB). Meanwhile, for uncertified seeds, the production process does not go through the methods and requirements such as certified seeds. Therefore, analysis of the marketing strategy for rice seed production is very necessary because this will be very helpful in determining strategies in marketing rice seed production (Umboh, 2014).

One of the rice seed production businesses in the Gorontalo area is the Balai Pengawasan Sertifikasi Benih of Gorontalo Province, namely as a supporting institution for government programs in increasing the empowerment of rural communities, especially the agricultural sector by expanding employment opportunities for the community through efforts to meet the need for high quality certified seeds so that they can to increase agricultural production towards food self-sufficiency, this Balai Benih Padi provides various types of seeds which are divided into four classes, namely the first class is Breeder Seed (BS = Terrace Seed), the second class is basic seeds (Foundation Seed = FS), the third class is the main seed (Stock Seed = SS), and the fourth class is the seed (Extension Seed = ES).

Provision of various rice seeds according to predetermined standards and classes is certainly not an easy task because not all farmers can produce superior seeds and get seed certification. Based on data from interviews with employees at the Balai Pengawasan Sertifikasi Benih of Gorontalo Province, it is explained that currently the government is more focused on strengthening the process of monitoring the stages to obtain seed certification so that certified rice seeds can guarantee superior quality and satisfactory results. On the other hand, there was a problem that was complained by farmers that after using certified seeds produced unsatisfactory rice, some farmers even experienced crop failure after using certified rice seeds. The above conditions give rise to the perception that seed certification at the Balai Pengawasan Sertifikasi Benih of Gorontalo Province is not going well because officers can work with seed providers to issue seed certificates even if the seeds do not meet the standards.

Research results from Wahyuni (2015) state that in the seed certification system in Indonesia, seeds are classified into four seed classes, namely types of seeds (BS), basic seeds (BD), basic seeds (BP) and scatter seeds (BR). Farmers are supposed to use scatter seeds to produce rice. However, in some provinces many farmers use staple seeds because they think that a higher seed class will produce more grain. Whereas seed certification is designed to control the authenticity and purity of varieties, so that genetic potential can be reflected in the planting. Research results from Raharjo (2018) show that the use of superior rice varieties is a technological innovation that is easily adopted to increase rice productivity. Without a subsidized seed program, many farmers do not use quality / certified rice seeds because quality seeds are not available when needed. The existence of a digital rice certification system is needed to support an ideal seed system by providing information on seed availability, seed demand, and seed stakeholder communication facilities.

2. Methodology

The research approach used in research is qualitative. In this research, data was collected using interview sheets and documentation data. The analysis used is descriptive analysis by describing the study of rice seed certification in Balai Pengawasan Sertifikasi Benih of Gorontalo Province.

3. Result and Discussion

3.1. Stages of Processing Seed Certification at Balai Pengawasan Sertifikasi Benih of Gorontalo Province

The results of the interview about how the stages of the application for rice seed certification at the Balai Pengawasan Sertifikasi Benih of Gorontalo Province explained that:

“The stages of UPTD-BPPSBP seed certification include the steps of applying for food plant certification, checking the truth of source, field and planting seeds, isolating plants and harvesting tools, sampling and testing / analyzing seed quality in the laboratory, issuing food plant seed certificates and labelling”. According to the informant about the seed suppliers in Gorontalo, it was explained that:
“Suppliers of seeds come from the government and from individual operators (Interview, RS.21.05.2019)” From the results of the interview about how the requirements for field testing on rice seeds in Balai Pengawasan Sertifikasi Benih of Gorontalo Province explained that: “The requirements for field testing on rice seeds are carried out by supervisors which include supervision there are field inspections 1, 2 and 3 as the seed procession stage.

After that, ask for laboratory testing, then the officer takes a sample and if it passes, the manufacturer asks to issue a label serial registration number for label matching” The stages of processing rice seed certification include application for food plant certification, checking the truth of source, field and planting seeds, isolating plants and harvesting tools, taking samples and testing / analyzing seed quality in the laboratory, issuing food plant seed certificates and label.

3.2. Obstacles in Processing Seed Certification in Balai Pengawasan Sertifikasi Benih of Gorontalo Province

When asked if there had ever been any problems in obtaining seed certificates, it was stated that: “The obstacle in obtaining seed certification is that if the test results do not comply with the standard, they must return to the laboratory test and the label has not been issued” (Interview, RB.21.05.2019)” When asked about laboratory testing prior to issuing a seed certificate, it was explained that: “It is certified if the first test with high moisture content and the physical condition is not good, it can be reprocessed for re-sampling if it does not pass the germination power, then the existing sample can be re-tested without the need to take samples in the field again (Interview, SD. 21.05.2019)”

Based on the results of interviews about the obstacles in obtaining rice seed certification, some information was obtained on the obstacles in obtaining seed certification, namely if hybrid rice had 85% moisture content. Meanwhile, for sprouts it reaches 80%. The problem is that if the test results are not up to standard then they have to return to the laboratory test and the defect label is issued. If only the sprouts are less than 80%, the laboratory test is carried out again so that if it passes, a test result certificate (HLU) will be issued. When asked about laboratory testing before the seed certificate was issued, it was explained that if the first test with a high moisture content and physical condition was not good, it could be reprocessed for re-sampling if it did not pass germination, then the existing sample could be re-tested without the need to take samples in the field again.

So basically, the issuance of seed certificates goes through several stages, namely the correctness of documents before planting to planting (data, labels, number of source seeds), land conditions (isolation and field history), correctness of area boundaries (according to maps), correct varieties, seed source and seed class, planting plan (variety, date of stocking, date of planting, class of seed, acreage), results of field inspection are reported. In the planting inspection stage, the food plant seed producer must submit a request for a crop inspection at the latest one week before the implementation of the crop inspection to the UPTD. Planting inspection can be carried out in the vegetative phase, the flowering phase, the cooking phase / before harvest.

The implementation of the crop inspection checks the previous documents, checks the location, area and date of the planting area, knows the distance and time isolation (especially for cross-pollinating plants), determines the observation sample (randomly assigns the sample so that it represents the entire crop, not the margins), makes a field map for determine the sample point, know the condition of the cropping (1/3 of the fallen plants of the area can be rejected, if it falls in groups it can be checked the remaining area that is not fallen, free of weeds)

In the label stage, it is explained that the supervision of label to find out the correctness of label by the food plant seed producer, the seed producer requests a certified seed label serial number or seal to the organizer, the label and or seal must be attached to each seed container that is easily seen. The activity of testing the quality of seeds is intended to determine the quality or quality of seeds in order to assess and determine the value of each sample and to determine the value of each sample of seeds to be tested whether it is in line with the seed quality factor. This information will be very useful for producers, sellers / distributors and consumers of seeds, because they can obtain reliable information about the quality or quality of a seed / seed group
4. Conclusion
The stages of processing rice seed certification include application for food plant certification, checking the truth of source, field and planting seeds, isolating plants and harvesting tools, taking samples and testing / analyzing seed quality in the laboratory, issuing food plant seed certificates and label. As well as the obstacles in obtaining seed certification, namely if the first test with high moisture content and the physical condition is not good, it can be reprocessed for re-sampling if it does not pass the germination power, then the existing sample can be tested again without the need to take samples in the field.

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