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Employment wage and wage system (human, animal and machine) at each stage of rice farming in irrigated rice fields

D Rukmana, Mahyuddin, M Salam, A N Tenriawaru, Akhsan, and A F Riadi

Department of Socio-Economic of Agriculture, Faculty of Agriculture, Universitas Hasanuddin, Jalan Perintis Kemerdekaan KM 10, Makassar (90245), Indonesia

E-mail: drukmana@gmail.com

Abstract. The purpose of this study was to analyze the wage system and labor costs (human, animal, and machine) used at each stage of rice farming in irrigated rice fields in Mulyasri Village, Tomoni District, East Luwu Regency, South Sulawesi. The sample of respondents in this study was 32 irrigated rice farmers. Data collection method used in this study was by conducting interviews and questionnaires. The data analysis method used in this research was a quantitative descriptive method. This research was conducted from October 2018 to November 2018. The results of the study used was the wage system in the village of Mulyasri namely wholesale and daily labor costs IDR 64,105,-/HOK (land processing), IDR 62,000,-/HOK (seeding), IDR107,327,-/HOK (planting), IDR 62,000,-/HOK (fertilizing), IDR 45,000,-/HOK (pest control), IDR 28,000/sack (harvest), and IDR419,749,-/HOK (post-harvest).

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1. Introduction


Agriculture has an essential role in the Indonesian economy. This is because the agricultural sector functions as a basis or basis for economic development. Besides, agriculture will become a vast sector if managed in an integrated manner and supported by adequate facilities and infrastructure, for example in terms of irrigation, it has been fulfilled so that the process of agricultural production, especially rice in one year can be biased twice even up to three times the harvest.

There is one needed to develop agriculture. It is labor used to manage agriculture. Several types of labor are used in agricultural processing. Some workers come from outside the family or wage labor while the others work in the family as well. In the eastern Luwu region, the workforce consists of men, women, and machines.

According to Shinta[1], labor is the energy that is expended in the process of activities to produce a product. Human labor (men, women, and children) can come from within and outside the family. Workers outside the family are obtained by wages and splice where each participant will return in the form of labor to other members.

Labor costs are defined as a remuneration provided as a substitute for labor for people who sell their energy, generally in the form of money or something valuable. The components of these costs can be divided into two parts; salary costs and wage costs[2].

Costs incurred by the farmer in the production process are called production costs including the goods purchased and services that are paid for the farm. There are 4 groupings of costs namely a) fixed costs are costs whose use is not used up within one production period, for example, land tax, water tax and depreciation of agricultural building equipment, b) variable costs are large and small

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costs depending on the scale of production, such as costs for fertilizers, seeds, pesticides and diseases, labor and harvest costs, c) cash costs which include water tax, credit or land tax, labor costs outside the family as well as the use of production facilities, d) non-cash costs are calculated costs to pay for labor in the family, such as the cost of harvesting as well as the cost of processing the land by the family of the farmer.

Wages are paid to each employee both as an identification tool and as an inspection tool against embezzlement [3]. Salary is the total amount determined as a substitute for services issued by workers because in the absence of labor, how the factory will start its business to carry out its work, and workers get salaries as compensation [4].

The wage system is divided into three. They are piece rate, time wage, and premium wage. Each rate will affect the performance of a worker outside the family. First piece wages are given by the agreement between the employer and the worker regardless of the length of time worked. This piece-rate tends to make the workers to quickly complete the work and continuing the other works immediately. Second, time wages are based on the length of time worked. This wage tends to make workers prolong work time in hopes of getting a more significant salary. Last, premium wages are given by taking into account productivity and work orientation. For example, within one day, workers are required to complete ten work units. If they can complete more than ten units, they will get additional wages. This wage system tends to boost worker productivity.

2. Methods

The research location was conducted in Mulyasri Village, Tomoni District, East Luwu Regency, South Sulawesi. Site selection was made by purposive sampling in deliberate choice considering the majority of the people work as irrigated rice farmers. The research started from October 2018 to November 2018.

The population in this study was rice farmers. The population was 315 irrigated rice farmers who live in Mulyasri Village, Tomoni District, East Luwu Regency. According to Arikunto[5], the number of samples chosen is 10% - 15% of the population and is done by simple random sampling. Based on this matter, the number of respondents of rice farmers was 31 irrigated rice farmers.

The data collected in this study consists of two types; a) primary data which was data obtained from direct interviews with respondents using questionnaires (list of written questions) prepared. This list was created to gather information about the characteristics of respondents (age, education, land area, farming experience, number of family dependents, household needs), costs used during the production to harvest process, total production per hectare, and revenue, b) secondary data which was data obtained from the village office, Central Bureau Statistics, reading material, literature, and documents that are closely related to this writing.

Data collection techniques used in this study were, a) structured interview which is a data collection technique by meeting in person or through other media and asking a number of questions related to research so that researchers get the information or data needed, b) questionnaire, which is a list of questions about the problem that you want to study to get the information required by the researcher. To find out the wage and wage system, this study used quantitative descriptive analysis by describing the numbers, averages, and percentages descriptively.

3. Results and discussions

Wage analysis and labor wage systems. Farmers use family labor or wage labor as an alternative way to meet the needs in the cultivation of the land they work in. Many farmers have limitations in trying their farming. One of them is the limitations of farmers in employment because labor cannot be fulfilled if only from the farmer's family. Farmers who have sufficient land tend to prefer using wage labor due to its narrow time allocation. Therefore, if farmers manage their farming without using wage labor, a large enough area of land will reduce the effectiveness of farming production.

Another factor that causes farmers to use wage labor is the limited technology that can save costs in land management and use of labor outside the family. Farmers in Mulyasri Village need help from

hired laborers or workers outside the family. Generally, farmers usually use wholesale labor for large or narrow land. Farmworkers set wages based on the area of land they are working. The most commonly used remuneration system is piece rates. Wage systems like this usually exist at the stage of land management, planting, harvesting, and post-harvesting. However, some farmers still use the daily wage system as in the process of seeding, fertilizing, controlling plant-disturbing organisms.

From the data, the researchers have learned that 32 (100%) respondent farmers used wage labor for land processing with an average labor flow of 17.70 HOK/Ha per planting season, labor costs IDR1,200,000,-/Ha. It can be calculated the average labor wage in the process of land management activities of IDR64,105,-/HOK. In the seeding process, there were 5 (15.63%) respondents farmers who used wage labor, the average labor cost of IDR62,000,- for the seeding process starting from soaking to seeding on the ground. In the planting process, there were 21 (65.62%) of the respondent farmers who used wage labor with an average labor flow of 1.38 HOK/Ha and a labor cost per Ha of IDR1,210,000,-/Ha and the average labor wage at this stage of planting is IDR107,327/HOK. Whereas for the stage of the fertilization process, there was 5 (15.63%) respondent who used wage labor with an average labor requirement of 0.47 HOK/Ha. The average labor wages are IDR62,000,-/ HOK. While for the stage of the process, there are seven pest control (21.88%) respondent farmers, who use wage labor with an average outpouring of labor of 1.17 HOK/Ha. The average wage of wage labor is IDR271,429,- with an average labor wage of IDR45,000,-/ HOK.

At the harvesting, stage wages are done by calculating the amount of production, for example in an area of 1 Ha produces 60 sacks of grain, each sack of grain that comes out counts IDR28,000,-/sack. In this stage, the average respondent farmer uses wage labor. The average labor flow in the harvesting stage is 2.96 HOK/Ha. Post-harvest activities namely the transportation of grain has a calculation that is based on the number of sacks that are transported in transportation mileage. Transportation costs in the village of Mulyasri are subjected to a fee of IDR7,000,- up to IDR10,000,-/sack. The average outpouring of labor in the post-harvest process is 5.42 HOK/Ha with an average labor cost of IDR419,749,-/HOK.

4. Conclusion

The existing wage system in Mulyasri Village, Tomoni District, East Luwu Regency, South Sulawesi is the wholesale wage system and also the daily wage system. The piece-rate system is usually in the process of land management, seeding, planting, pest control, harvesting to post-harvest while the daily wage system is usually in the fertilization process. Labor wages in the process of land management activities amounting to IDR64,105,-/HOK, seeding process is IDR62,000,-/HOK, the process of planting is IDR107,327,-/HOK, the fertilization process is IDR62,000,-/HOK, pest control is IDR45,000,-/HOK, the harvesting process is IDR28,000,-/sack while for other activities such as post-harvest (transportation) is IDR419,749,-/HOK.

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