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INNOVATION OF PROCESSING RICE INTO FLOUR BY USING A PORTABLE MILLING MACHINE

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ABSTRACT

The purpose of the KKM-Thematic program is that students can analyze problems and focus on mentoring to prepare superior human resources based on the Creative Economy. The problem in the community of Cerukcuk Village is the lack of skills in processing rice into other processed. The method of implementation in this devotion is (1) identifying the problems in Cerukcuk Village, (2) making Portable rice flour milling machines, (3) testing the use of Portable rice flour milling machines, (4) evaluation, (5) socialization to the community. The result of this activity is that the community can make Portable rice flour milling machines and can use it themselves to improve the economy of the community of Cerukcuk Village.
Keywords: *Innovation;Rice;Portable;*

INTRODUCTION

Rice is a staple food in Indonesia. Hermanto in Zaeroni and Surya (2016) said that the Indonesian population consumes rice per year amounting to 139.5 kg more significant than the world's rice consumption of 60 kg per year. Beras is a strategic commodity because it can affect all policies in a country that makes rice as a source of basic food (Rahmasuciana et al in Septiadi and umbu, 2019).

KKM is an active implementation of Tri Dharma Higher Education, which is expected to analyze problems and focus on mentoring to prepare superior human resources based on creative economy and other fields.

In Cerukcuk Village, the most significant livelihood is farming rice, which is as many as 255 members from 8 Farmers Groups. The area of rice farming land in Crukcuk Village is 533 ha, so the rice in the village of Cerukcuk is abundant. However, because of the lack of skills possessed by the people of Cerukcuk Village in processing rice, the rice in Cerukcuk Village is only processed into rice. Based on existing problems, we KKM group 40 students are encouraged to help the community make new commodities other than rice, namely rice flour. In addition, it is also a source of new livelihood for the community, so that in the future rice is not only a single commodity, but can be processed into other commodities in the form of rice flour.

The right technology that can be applied is a portablerice flour millingmachine, so that people can process their rice into rice flour

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METHOD

The methods used in the implementation of this activity are (1) identifying the problems that exist in Cerukcuk Village, (2) making Portable rice flour milling machines, (3) trials of the use of Portable rice flour milling machines, (4) evaluation, (5) socialization to the community

RESULTS

Tool

- Cutter
- Ruler
- Pencil
- Nail
- Hammer
- Iron Glue
- Saw
- Drill machine
- Lathe
- Screw

Material

- Plywood
- Dynamo
- Pan Belt
- Stainles Iron
- Kleher
- As Iron
- Kaso Wood
- Iron Sheet
- Bolt
- Knife

- **How to Make a *Portable*** Rice Flour Milling Machine

Cut the Triplek with a cutter for a base size of 100 cm x 60 cm, for the rear background 100 cm x 60 cm, for the main machine 25 cm x 25 cm as much as 25 sheets. Make a hole in the middle on one sheet for the kleher, for the funnel to enter 15 cm x 7 cm x 3 cm 4 sheets, for the connecting path from the funnel to the machine 10 cm x 3 cm x7 cm 2 sheets, and 10 cm x 5 cm 1 sheet. For the machine in 10 cm x 10 cm 4 sheets. For the funnel out 18 cm x 15 cm x 10 cm 3 sheets. Make a circle with 3 cm radius for the kleher section

1. Glue the trilate that has been cut using iron glue and nails.
2. For the engine part, the iron ace is made to thread at the end with a lathe, then attach the iron ace with the kleher then tighten it using a bolt, put the screw on the thread then put the knife and close with the bolt again, for a firmer result of glue using iron glue.

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3. For stainless iron cutting blades measuring 15 cm x 5 cm 2 sheets, hole the middle and then attach to the iron ulcer
4. Install the engine part on the hole in the strip made a hole, then glue it with iron glue.
5. Close the side on the machine knife, then the bottom is filtered.
6. Make the filter using iron sheets, hole small with nails, put on the bottom of the knife, and glue it using iron glue.
7. Cut the cassower wood by adjusting the size of the base, then the nails so that they are tinged.
8. Fittingg the finished machine on the pedestal, then the nail to connect.
9. Install the dynamo in the main engine, so as not to sway when the dynamo rotates for two attachments with iron next to the dynamo, install screws, then glued with the drilling machine.
10. Install a pan belt to connect the engine with the dynamo.
11. Pair the background with nails.
12. The machine is ready to try.

Trial of use of *Portable* Rice Flour Milling Machine

When the rice flour milling machine has been completed, then the machine is tested first by students kkm kelompk 40 in the following way:

1. Soak the rice to be ground
2. Turn on the engine
3. Put the rice into the funnel of the milling machine
4. Let the container in the funnel where the flour comes out
5. Wait until the milling process is finished rice flour is ready to use

Evaluation

Evaluation is concluded based on the implementation of activities on the ground.

Identify problems

The first activity carried out by KKM Group 40 students was to identify the problems that exist in Cerukcuk Village. Identification of the problem is behind creating the right technology in the form of *a Portable*Rice Flour MillingMachine.

The lack of skills of the community of Cerukucuuk Village in processing rice, makes KKM Group 40 students encouraged to help the community in making new commodities other than rice, namely rice flour. In addition, it is also a source of new livelihood for the community, so that in the future rice is not only a single commodity, but can be processed into other commodities in the form of rice flour.

Manufacture of *Portable* Rice Flour Milling Machine

Making portable rice flour milling machines requires a long time because it is constrained by time and the division of KKM activity tasks in the field. The tools and materials used to manufacture *Portable* rice flour milling machines are easy to find and affordable.

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Figure 1. Portable *Flour* Milling Machine Manufacturing Process

Figure 2 Process of Making Rice Flour Grinder

1. **Trial of the use of *Portable*** Rice Flour Milling Machine
   After the *Portable* rice flour milling machine was successfully created, the machine was tested first to find out the effectiveness of the *Portablerice* flour millingmachine.
2. **Evaluation**
   Based on the trials that have been carried out there are obstacles, namely *portable* flour milling machines rotating the selection at a slow speed. This is because the power in the dynamo is too small, so its effectiveness is reduced.
3. **Socialization to the Community**
   In this activity, KKM Group 40 students explained the appropriate technology created by KKM Kelomopk 40 students, explaining the purpose of creating the right technology in the form of *Portable*rice flour milling machines, tools and materials used to make *Portable*rice flour milling machines, how to make *Portable Portable*riceflour milling machines, and how to use rice flourmilling machines. Socialization activities were carried out at The Nichecuk Village Office and KKM Post group 40.

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Figure3. Socialization to the community of Cerukcuk Village

CONCLUSION

Based on identifying the problems found, the right technology that can be used is to make a portablerice flour millingmachine. So, the community can create a new commodity, namely rice flour, in addition, it can also be used as a new livelihood for the community of Cerukcuk Village. The purpose of socialization to the people of Cerukcuk Village is so that later they can make portable rice flour milling machines and use it themselves to improve the economy of the community of Cerukcuk Village.

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