

## UGM Students Develop Automatic Fish Grading Machine

Thursday, 06 July 2017 WIB, By: Marwati



Five UGM students develop an automatic fish grading or sorting machine. It is made to help fish farmers in sorting the fish based on their size, weight as well as quality faster, using less energy.


Those students are Ikhwana Aisyah (Aquaculture), Muhammad Hadyan Akbar (Engineering Physics), Nizar Akbar Meilani (Information Technology), Revaldy Imani Chairistian (Electrical Engineering), and Ratya Prabaswara (Mechanical Engineering).

This machine development was started from their will to solve the grading issue that is often faced by fish farmers. All this while, most of them still use conventional ways of grading which are using hands and dosing tools such as can, glass, and so forth. Meanwhile, in order to make the size of the fish uniform, they usually use a perforated basin.

“Those conventional ways would not give an optimal result,” said Nizar on Wednesday (5/7) at UGM Campus.

Grading using those conventional ways are not efficient because the farmers have to count the fish one by one manually. Moreover, it needs high concentration so there will be no mistake during the counting. Another method is counting together by grading the fish.

According to Nizar, those conventional ways are not efficient and effective for grading the fish.



Therefore, he and his team try to develop a supporting machine for the fish farmers that is expected to save time and energy during fish grading.

“We initiate to make a grading machine which can sort the fish based on their size and determine the number of fish that has been sorted efficiently, effectively, and faster than the manual one,” said Nizar.

The grading machine is developed based on microcontroller ARM-32 bit using IC STM32F4. Those make this machine to have a high processing speed. It is also equipped with supporting sensor using a photoelectric sensor that has proved to have a high accuracy in the automation industry.

Nizar further said V-Sorter is also developed based on Internet of Things (IoT) which can connect the machine with an electronic instrument such as computer or smartphone that can be accessed by the fish businessman. In addition, it also can be used as a control tool to control the grading machine both to turn off, turn on, and change the machine mode.

“We hope this machine can help the fish farmers both during the pisciculture period until the marketing efficiently, thus it can increase their welfare,” he added.

---

## Related News

- [UGM Students Earn International Award in Thailand](#)
- [UGM Students Develop Fish Doctor App](#)
- [Thanks to Fish Waste, UGM Students Win National Business Competition](#)
- [I-PAPS, Semi-Automatic Pressing Machine for Helmet Production](#)
- [UGM Students Develop Fresh Water Fish Cultivation Platform](#)