

## **Effect of formula variation in the properties of fish feed pellet**

### **Abstract**

Most of fish feed pellet in market is low in terms of water stability and easily swell when it is immersed in water. Thus, the soluble vitamins and minerals will be easily leached out from the pellet. These will lead to the nutrient deficiency and environmental problems in fish tanks or ponds. Therefore, a study was conducted to minimise the degree of swelling and mineral leaching while the floating time is maximised. For these purpose several formulations of fish feed were made and tested. The formulation was based on common resources such as corn flour, soy flour and tapioca flour. To get water stability which is better floating time and lower leach ability, palm oil stearin was added as a main subject compound for this study. Statistical method, D-optimal crossed design of response surface methodology was used for the analysis and optimisation of the properties of fish feed pellet produced. In the statistical analysis, the physical properties such as degree of swelling, leaching and floating ability were chosen as the responses whereas pellets composition and processing temperature as the independent factors. The result shows there is a relationship between fish feed formulation and properties of fish feed pellet produced. The optimum of the floating time, leach ability and stability of fish feed pellet also can be obtained. © 2010 Asian Network for Scientific Information.