

**IDENTIFICATION THE BEST VARIETY OF SOYBEAN BASED ON  
COLOR OF SEED BY  
FUZZY CLUSTER MEANS**

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***Abstract***

*Final project about identification of soybean varieties based on color by Fuzzy Cluster Means (FCM ) was done. This final project aims to determine the identification of soybean varieties using FCM based on the color then compared by results of data processing by artificial neural network (JST).*

*This experiment used soybean seeds as objects of varieties: Anjasmoro, Argomulyo, Argopuro, and Panderman. Input data used in this final project in the form of RGB data of each variety with the color variations of data retrieval, which is black and brown and kind of lamps used, namely: incandescent and halogen. The data is processed by using FCM to produce the output of the cluster centers and membership degrees and the value of an error with FCM method.*

*The result of the final project, it is known that each character varieties meet fuzzy membership degrees, ie at a maximum and minimum class for another class. For the level of accuracy, FCM provides the truth as much as 80%. If it compared by JST, FCM is less accurate but more consistent in giving the truth.*

**Keyword : soybeen, RGB, Fuzzy C-Means (FCM)**