# RINGKASAN

Ikan lele dumbo (*Clarias gariepinus*) merupakan ikan omnivora. Faktor yang berpengaruh terhadap pertumbuhan ikan yaitu pakan ikan. Pakan yang dibutuhkan ikan omnivora untuk dapat meningkatkan pertumbuhan yaitu harus mengandung protein lebih dari 35% dari berat tubuhnya. Sumber protein hewani alternatif yang dapat digunakan yaitu maggot dari lalat *Hermetia illucens*. Pemberian pakan maggot telah terbukti mampu meningkatkan laju pertumbuhan pada beberapa ikan, namun pada ikan lele dumbo belum diteliti bagaimana pengaruhnya terhadap aktivitas protease.

Penelitian ini dilakukan dengan tujuan untuk mengetahui pertumbuhan dan aktivitas protease ikan lele dumbo (*Clarias gariepinus*) yang diberi pakan maggot *Black Soldier Fly* (*Hermetia illucens*) dengan level berbeda dan mengetahui level pemberian pakan maggot yang dapat menghasilkan pertumbuhan dan aktivitas protease optimal pada ikan lele dumbo. Penelitian dilakukan secara eksperimental menggunakan Rancangan Acak Lengkap (RAL) dengan 3 perlakuan yaitu level pemberian pakan sebesar 3, 6, 9% dari berat biomassa ikan dan setiap perlakuan diulang 4 kali. Variabel penelitian ini adalah pertumbuhan dan aktivitas protease. Parameter yang diukur adalah pertambahan berat, laju pertumbuhan relatif, laju pertumbuhan spesifik, dan faktor kondisi. Data hasil penelitian dianalisis dengan ANOVA *(Analysis of Variance)*. Jika hasil berbeda nyata dilanjutkan dengan uji Tukey. Hasil penelitian menunjukkan level pemberian pakan yang berbeda berpengaruh nyata terhadap pertambahan berat, laju pertumbuhan relatif dan laju pertumbuhan spesifik ikan lele dumbo, namun tidak berpengaruh nyata terhadap faktor kondisi, aktivitas tripsin-*like* dan kimotripsin-*like*. Pemberian pakan sebanyak 9% dari berat biomassa tubuh ikan menghasilkan pertambahan berat, laju pertumbuhan relatif dan laju pertumbuhan spesifik terbaik.

**Kata kunci:** aktivitas protease, *Clarias gariepinus*, maggot, pertumbuhan

# SUMMARY

African catfish (*Clarias gariepinus*) is an omnivorous fish. Factors that influence fish growth are fish feed. The feed needed by omnivores to increase growth is that they must contain more than 35% protein from their body weight. An alternative source of animal protein that can be used is maggot from the Hermetia illucens fly. Maggot feeding has been shown to increase the growth rate in some fish, but in African catfish it has not been studied how it affects protease activity.

This research was conducted with the aim to determine the growth and protease activity of African catfish (*Clarias gariepinus*) fed maggot Black Soldier Fly (*Hermetia illucens*) with different levels and to know the level of maggot feeding which can produce optimal growth and protease activity in African catfish . The study was conducted experimentally using a Completely Randomized Design (CRD) with 3 treatments, namely the feeding level of 3, 6, 9% of the weight of fish biomass and each treatment was repeated 4 times. The variables of this study are protease growth and activity. The parameters measured were weight gain, relative growth rate, specific growth rate, and condition factor. The data of the research results were analyzed by Analysis of Variance ANOVA. If the results are significantly different then proceed with the Tukey test. The results showed different feeding levels significantly affected weight gain, relative growth rates and specific growth rates of African catfish, but did not significantly influence the condition, trypsin-like and chymotrypsin-like activities. Feeding as much as 9% of the weight of fish body biomass results in the highest weight gain, relative growth rate and specific growth rate.



**Key words:** activity of proteases, *Clarias gariepinus*, maggot, growth