

A simple method for rearing *Drosophila melanogaster* Mg.

by

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Many entomologists have claimed the attention of using *Drosophila melanogaster* Mg. as a highly susceptible test insect to insecticides.

The use of canned custard pumpkin as a laboratory medium was suggested by BARTLETT (1951). Because canned custard pumpkin is not produced in Indonesia, we tried to use fermented cassava. The fermented cassava as a laboratory food medium was found by the natural feeding of *Drosophila* on it. Fermented cassava is very commonly used in our country and can be found everywhere at any moment. It is made from steamed cassava which is infected with a certain amount of "native yeast" powder. This native yeast is made by our people with primitive methods and equipments and sold by them on the market. It consists of a mixture of yeast and other microorganisms.

Three pieces of fermented cassava of 30 grams were enough for getting approximately 600 adult flies. In each of a number of 3 liter glass jars, 10 pieces of such fermented cassava were exposed to one hundred specimens of *Drosophila*. The jars were put at a temperature which varied daily between 26° C and 29° C. The mouths of the jars were covered with a thin cotton cloth. After two days of exposure the medium on which the flies had deposited their eggs was transferred to other glass jars. A piece of cotton wool moistened with water was placed into each jar in order to get the right humidity. Pupation of the *Drosophila* larvae took place on the surface of the fermented cassava, without adding special equipment for pupation. The freshly emerged flies were transferred to other experimental cages. Fresh fermented cassava or honey solution appeared to be a good food supply for the adults.

By means of the new nutrition-medium viz. the fermented cassava, a simple method of rearing *Drosophila* was developed because it appeared to be not necessary to breed the flies on a sterilized medium; the natural antibiotics present in the fermented cassava prevented the occurrence of the unwished microorganisms causing rapid decomposition of the medium.

Fermented cassava appeared to be an ideal food medium for the larvae and adults of *Drosophila melanogaster* if compared with other media such as banana or papaw. The average duration of the life cycle — that is the time which elapses between the deposition of the egg and the hatching of the adult fly — of about 5000 flies which we bred on fermented cassava amounted to 10 days.

Literature cited

- BARTLETT, B. R., 1951, A new method for rearing *Drosophila* and a technique for testing insecticides with this insect. *J. econ. Ent.* 44: 621.