Hypothemenemus hampei is one of the most harmful pests which causes the decline in...
production and quality across the world where coffee is cultivated.

Kalshoven (1981) classified the taxonomy of coffee berry borer into:

Kingdom : Animalia

Phylum : Arthropoda

Class : Insect.

Ordo : Coleoptera

Family : Scolytidae

Genus : Hypothenemus

Spesies : Hypothenemus hampei

Biology dan Ecology of H. hampei

H. hampei grows through a complete metamorphosis with some stages; egg, larva, pupa, and imago or adult insect. The females – which are going to lay eggs – will create holes with a diameter of 1 mm at the coffee berry. These eggs usually hatch in 5-9 days. The color of
larva
is white with a brown head and a length of 0.7–2.2 mm and a width of 0.2–0.6 mm. Females have two larvae stages and males only one. They have strong mandibles, and their larval phase lasts 10 to 26 days. The pupae are yellowish, with a length of 0.5–1.9 mm.

After the post-harvest time, this insect population will be decreasing due to food scarcity. Female insects are the most dominant ones in the population as they have longer lifespan than males. In this condition, the ratio of males and females can be 500:1. (Wiryadiputra, 2007).

Attack Symptoms of Coffee Berry Borers

Initially, H. hampei beetles attack hard endosperm of the coffee berries. They may also attack the fruit which is not hard yet by drilling the seeds to get food and then leaving them (Baker et al., 1992). If this occurs, the fruit will not develop
the color will change to reddish yellow and eventually fall off. The attack on such unripe seeds would decrease the quality of coffee because the seed core is perforated and filled with eggs (Irulandi et al., 2007). Defective coffee berries negatively affect the composition of their chemical content, especially reducing the caffeine and fructose resulting to poor coffee taste. (Tobing et al., 2006).
HYPOTHEMUS HAMPEI (COFFEE BERRY BORER)

Oleh Administrator
Senin, 27 Maret 2017 11:06

The coffee berry borers, Hypothemus hampei, are black or shiny brown insects that are about 3 mm in diameter. These pests belong to the family Scolytidae (Coleoptera). They are originally from Africa and were first reported in Central America. The annual report showed that the yield loss in coffee plantations varies according to altitude, coffee variety, soil types, and weather conditions. The tolerance of these pests to temperature and humidity is high, but they are unable to drill at temperatures of 15°C-33°C for larva, pupa, and adult insects. Female insects can drill the berries at temperatures of 20°C-30°C and 27°C-32°C for optimum temperature for eggs. They can live at temperatures of 30°C-35°C. The development of these pests can be influenced by temperature, humidity, and the availability of food and shelter. They can easily be found in coffee plantations producing more than $500 million. The estimation of the yield loss caused by this pest was estimated at 20%. Since this pest is difficult to control, the solution is to implement a sanitation system to prevent its spread. Preventive measures include the use of resistant coffee clones and fertilization system to overcome the attacks of these pests.