

Black soldier fly larvae (*hermetia illucens*) organic waste bioremediation potential

The world faces an imminent shortage of proteins to cater for a rising demand, which in turn will result in price rise of the few protein diets available in the market because of the scarcity and high cost of fishmeal and fish oil. The result of this is devastating as it has led to arise in diseases associated with protein and energy

malnutrition. Insects that have ability to recycle and transfer nutrients of organic wastes into their biomass have been identified as an alternative protein and energy source in animal feeds, which have become too expensive. The production of insects such as the Black Soldier Fly can be combined with the reduction of organic wastes, whose collection and disposal in most developing countries including Kenya, is a well-known and documented problem. Their larvae have been utilised to manage organic wastes such as the faeces of poultry, pigs and cows in many parts of the world such as the Americas, Asia, and Europe. Various trials also indicate the potential of the larvae to be a sustainable alternative replacement of fishmeal and oil in fish feeds. This article reviews various bioremediation studies on the black soldier fly larvae, economic benefits of the insect, rearing methods that have been developed and explores the likelihood of importing this biotechnology into Africa's developing countries to solve the twin problems of wastes, and protein supply for animal feeds.

