

How safe is protein bait spray?

Protein bait itself is safe to humans and some baits are used as animal feeds. However, safety to humans is based on the insecticide that is combined with the bait for killing the fruit flies. GF-120 combines bait with the insecticide called spinosad for ease of use. Spinosad is very safe to humans. However, none is safe for consumption.

Recommended fruit fly management methods

- Population monitoring
- Protein bait
- Male annihilation
- Field sanitation
- Biological control (biopesticides, parasitoids and weaver ants).



Farmers harvesting mango.



...for quality horticulture for Africa

icipe – Working in Africa for Africa...

International Centre of Insect Physiology and Ecology (icipe) – was established in 1970 in direct response to the need for alternative and environmentally-friendly pest and vector management strategies. Headquartered in Nairobi, Kenya, icipe is mandated to conduct research and develop methods that are effective, selective, non-polluting, non-resistance inducing, and which are affordable to resource-limited rural and urban communities. icipe’s mandate further extends to the conservation and utilisation of the rich insect biodiversity found in Africa.

icipe contributes to sustainable food security in Africa through the development of integrated pest management systems for major agricultural and horticultural crops. Such strategies include biological control, and use of behaviour-modifying and arthropod-active botanicals. icipe puts emphasis on control approaches that have no detrimental impact on the environment. These options are always designed to fit the needs of the farmers, and are developed on-farm and with farmers’ participation. In addition to fruit flies, other key areas of icipe’s research include pests of tomato, brassicas, beans, and staple food crops such as maize and sorghum.

African Fruit Fly Programme is an icipe-led fruit fly management programme for income generation, poverty alleviation, and improving food and nutritional security of growers across Africa.

COVER PHOTO
Protein bait; Fruit Fly Mania™.

DONORS: European Union; BMZ/GIZ, Germany; USAID, USA; USDA-APHIS, USA; FAO, Italy; IAEA, Austria, Biovisioan, Switzerland.

COLLABORATORS: USDA-APHIS, USA; Royal Museum for Central Africa - Tervuren, Belgium; University of Bremen, Germany; Max Planck Institute, Jena, Germany; USDA/ARS, Hawaii, USA; IITA; Russell IPM, UK; Ministry of Agriculture, Kenya; Ministry of Agriculture, Food Security and Co-operatives, Tanzania; KALRO, Kenya; Mikocheni Agricultural Research Institute, Tanzania; Mozambique Ministry of Agriculture; Eduardo Mondlane University, Mozambique; Private Sector in Mozambique; Real IPM, Kenya.

Photos: icipe, Peter-Luethi_Biovision



Fruit fly Control with Protein Bait ...for quality horticulture for Africa



ACKNOWLEDGEMENT: We gratefully acknowledge the financial and technical support of our core donors: Swiss Agency for Development and Cooperation (SDC), Switzerland; Swedish International Development Cooperation Agency (Sida), Sweden; UK Aid, Government of the United Kingdom; Ministry of Higher Education, Science and Technology, Kenya; and Government of the Federal Democratic Republic of Ethiopia.



International Centre of Insect Physiology and Ecology (icipe)
PO Box 30772-00100 Nairobi, Kenya
Email: icipe@icipe.org | Website: www.icipe.org | technologytransfer.icipe.org
Support icipe: www.icipe.org/support-icipe



What is a protein bait?

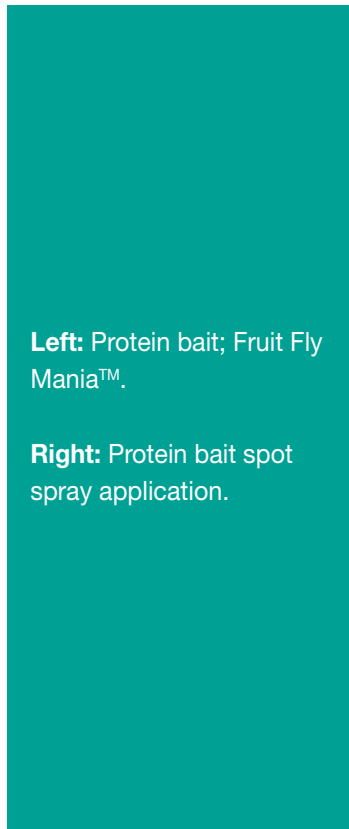
Female fruit flies require protein to mature their eggs. Sugars in protein bait are also important for the fruit flies to survive and mature. Protein bait, therefore, is attractive to female and male fruit flies. When mixed at the recommended concentration with appropriate insecticides, they attract different species of fruit flies that attack fruits and vegetables.

How does the protein bait work?

Fruit flies can smell the odours of protein bait from short distances (10–15 m). The bait is combined with a killing agent, such as insecticide, and applied in a localised spot. The bait attracts the flies from a distance to the spot of application.



...for quality horticulture for Africa



The flies feed on the bait, ingest the toxicant and die, or if the bait is in a trap, the flies are killed by drowning in the bait. It is, therefore, an ‘attract and kill’ management method.

How do I apply the protein bait after mixing?

After mixing the bait and insecticide, apply to 1m² of canopy of each tree. You can apply up to 2 spots on the tree depending on the size of the tree. Target the spray to the lower surface of leaves to enhance persistence and reduce chances of wash off by rain.



...for quality horticulture for Africa



When should I start the protein bait spray in my farm?

Start spraying when fruits are about 1.3 cm (1/2 inch) in size and when population monitoring shows that fruit flies are already present in the orchard. Spray weekly until the very end of the harvest.

What commercial protein baits are available in Africa?

Fruit Fly Mania is commercially available in Kenya. It can be used as bait spray mixed with appropriate insecticide and also used in traps for mass trapping and monitoring. It can be purchased from Kenya Biologics, ???? or the registered agro-dealers, GF-120 bait spray (already premixed with spinosad pesticide) is in the process of registration in many African countries.



...for quality horticulture for Africa