

Black soldier fly-based protein rich aquaculture feed: a viable replacement to fish meal

- **Brand Name: Shatpada-Fish Feed**
- **Insect germplasm registration:** Black soldier fly (*Hermetia illucens* L.) is registered under Arthropod Germplasm Information System (AGIS), ICAR-NBAIR, with scientific name, Institute Accession No. IS-STR-01 and National Accession No. NBAIR-IS-STR-01. NCBI GenBank Accession number MG682545.
- **Target industries/customers:** Fish feed industries, Fish farmers, private entrepreneurs engaged in aquaculture.
- **Production method:** Black soldier fly (BSF) prepupae was used as a protein supplement in the feed preparation. Two types of feed viz., sinking feed (32.53% crude protein) and floating feed (28% crude protein) was developed in collaboration with ICAR-Central Inland Fisheries Research Institute, Barrackpore Kolkata during 2017 to 2020.
- **Validation:** The formulated black soldier fly-based pellet feed was evaluated in three fishes viz., Tilapia (*Oreochromis niloticus*), amur carp (*Cyprinus carpio*) and Pangas (*Pangasianodon hypophthalmus*) for its growth parameters.
- **Benefits:**
 1. The formulated fish feed recorded good palatability to fishes without any deleterious effects over its growth and development.
 2. Formulated black soldier fly-based fish feed recorded lowest feed conversion ratio (1.41-floating feed in Pangas; 2.37-sinking feed in Pangas) on par with commercial meal (1.40-floating feed in Pangas; 2.93-sinking feed in Pangas).
- **Commercialization of technology:** Technology has been approved for commercialization.



BSF adult fly



BSF pupae



Formulated BSF feed



Tilapia fed with formulated BSF feed

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