

# Using BSF

BSF: a sustainable superfood for nutrition, resilience, and local food security.

MBC Solutions Program



## Benefits of consuming BSF

**Protein:** helps the body grow and strengthen.

**Fat:** provides energy and warmth.

**Calcium and Phosphorus:** strengthen bones and teeth, making the body strong.

**Methionine and Lysine:** support muscle growth and boost immunity.

**Nutritious**, improves food quality and provides energy for the body.

**Affordable**, low-cost farming while producing high nutrition.

**Meat substitute**, reduces spending on food.

**Easy to use**, can be mixed with all regular food (rice, soup, sauce, bread,...).

Protein	38,5 - 63 %
Fat	6,6 - 39 %
Calcium	1,7 - 3,2 g/kg
Phosphorus	3 - 4,5 g/kg
Methionine	6 - 8 mg/g
Lysine	4 - 5 mg/g

(Barragan-Fonseca et al., 2017; Shumo et al., 2019)

## BSF farming and food safety tips



### Choose the right feed for BSF

- Use clean plant-based food, such as fruit peels, vegetables, etc...

### Maintain hygiene

- Clean equipment and rearing areas regularly to prevent diseases and improve BSF quality.
- Cover rearing trays to prevent other animals from entering.

### Harvest at the right time

- Collect BSF when they are young and fat (10–15 days), as they are more digestible and nutritious.

### Inform consumers beforehand

- As with seafood, some individuals may be sensitive to BSF.

### Reduce the risk of allergies

- If you are concerned about allergies, mix BSF with ingredients such as ginger or turmeric, which may reduce reactions.

## Food that can be mixed with BSF: rice, vegetables, cassava, maize,...



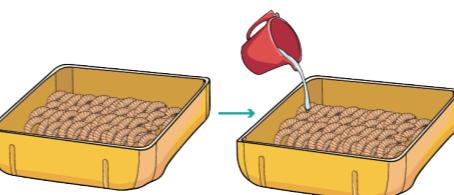
This booklet was produced by **Madagascar Biodiversity Center (MBC)** through its Circular Farming Program, in collaboration with local farmers and nutrition specialists.  
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## Preparing BSF for food

### Cleaning

**Goal:** remove leftover food from the BSF's gut.

- Leave in a clean, dry tray for 24 hours.
- Rinse the BSF with clean water.



### Boiling

**Goal:** to kill BSF and make digestion easier.

- Boil in water.
- Optional: add a pinch of salt to help cleaning.
- Boil for 3–5 minutes.
- Drain the water.



### Drying

**Goal:** to make storage easier and facilitate turning into powder.

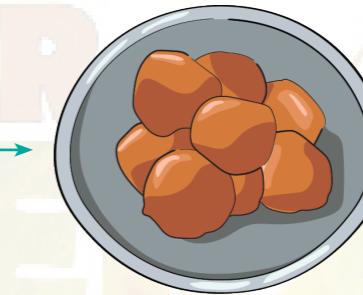
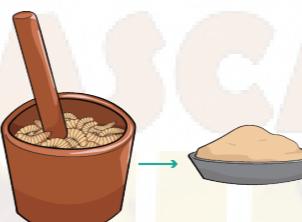
- Spread on a clean tray in a dry, warm place.
- Cover to protect from dirt.
- Turn the BSF once per day to ensure even drying.
- BSF dries in 2–3 days.



### Grinding

**Goal:** to mix BSF with regular food (rice, soup, cassava, maize,...).

- Grind dried BSF into a powder using a mortar and pestle.



### Storage

- Place dried BSF in a clean, tightly closed container.
- Keep in a dry place, out of direct sunlight.
- Label the container with the date of drying.
- Can be stored for 3–6 months.



### Fried BSF

- **Ingredients:** BSF, salt, oil.
- **Preparation:**

- Sprinkle salt on the BSF.
- Heat oil in a pan or pot.
- Add BSF to hot oil.
- Cover and stir frequently.
- When the skin curls and crisps up, it is cooked.

### BSF Sauce

- **Ingredients:** BSF, salt, oil, onion, and tomato.

- **Preparation:**
- Heat oil in a pot.
- Fry the onion and tomato, add salt.
- Add the BSF.
- Pour a little water to cover and cover the pot.
- Stir frequently.
- When the BSF is fully cooked and tender, it is ready.

### BSF Fritters

- **Ingredients:**

- 1 cup flour
- 2–3 tablespoons BSF powder
- 1 egg (optional)
- 1/4 cup water (or more if needed)
- Salt and pepper to taste
- Oil

- **Preparation:**

- Mix flour and BSF powder.
- Add egg, salt, pepper, and a little water.
- Heat oil in a pan.
- Fry like regular fritters until cooked.