

FARMING FUTURES: CLIMATE-RESILIENT RECP SPURS POULTRY PROFITABILITY



THE FUTURE OF POULTRY: CLEAN, EFFICIENT, RESILIENT

The livelihoods of 50 to 60 lakh people are intrinsically linked to 1 lakh poultry enterprises in Bangladesh.¹ Currently, the majority of poultry farms operate with high input costs and inefficient consumption of electricity, water, and materials. This operational inefficiency not only diminishes farmers' profits, causing many to experience financial losses, but also significantly contributes to environmental degradation. The sustainable solution to address these challenges is the adoption of Resource Efficient and Cleaner Production (RECP) methodologies.

Financing and Institutional Support: The implementation of RECP is being advanced through the Sustainable Microenterprise and Resilient Transformation (SMART) project, a five-year intervention (2023-2028) jointly financed by the World Bank and the Palli Karma-Sahayak Foundation (PKSF). Operating under the guidance of the Government of Bangladesh, the project is dedicated to providing financial and technical support to approximately 80 thousand microentrepreneurs across the manufacturing, processing, agriculture, and service sectors.

1. Bangladesh Poultry Industries Central Council (BPICC), 2017

ALTERNATIVE FEED: BLACK SOLDIER FLY (BSF) LARVA

The 'BSF Larva' offers a high-protein feed alternative to conventional soybean or fishmeal for poultry. Integrating this solution can effectively reduce the farm's monthly feed expenditure by 30–40%.

- **Implementation:** Eggs are sourced from insect farms or nature, and hatched by placing organic waste (including crop and kitchen remnants) in specialized trays or boxes.
- **Implementation Areas:** Through the interventions of the SMART project of PKSF, BSF larvae utilization is gaining traction among farmers in the Rajshahi, Naogaon, Natore, Chapainawabganj, and Sunamganj regions.



WATER USE EFFICIENCY TECHNIQUES



Auto Drinker or Nipple Use

BENEFIT

Reduces water wastage and minimizes pollution by 40-50%.

Cost
(per 1,000 Chickens)

BDT 60 thousand (Unit cost is 50 to 350)



Sprinklers for Temperature Control

BENEFIT

Lowers the farm shed's roof temperature by 3–5°C, consequently reducing energy demand.

Cost
(per 1,000 Chickens)

BDT 4–5 thousand



Nozzle or Valve for Water Flow Control

BENEFIT

Ensures controlled water dispensing at a specific rate, minimizing resource loss.

Cost
(per 1,000 Chickens)

BDT 1–2 thousand

Implementation Areas: Tangail, Gazipur, Sunamganj and nationwide.

ENERGY EFFICIENCY: POWERING FARMS THE SMART WAY

The SMART Project helps farmers cut energy bills and shift to greener alternatives.



Solar Power

Benefit: A small solar system can fully run shed lights and fans.

Cost BDT 20,000–30,000 per 1,000 Chickens



Roof Insulation

Benefit: Keeps sheds cooler naturally, reducing electricity use by 15–20%.

Cost BDT 40–50 per sq. ft.



Transparent Sheets

Benefit: Bring in sunlight—no daytime lights needed!

Cost BDT 150–250 per sq. ft.



Infrared Heating Bulbs

Benefit: Gentle, effective heat for chicks using very little power.

Cost BDT 300–400 per bulb

Implementation Areas: Tangail, Sunamganj, and various coastal districts.

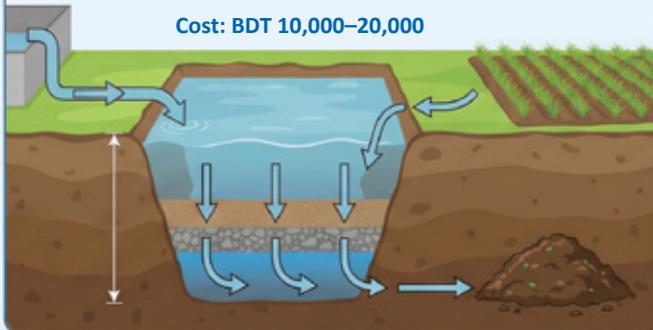
WASTE MANAGEMENT

Poultry waste can be disposed of sustainably, and in many cases, can be used to produce energy or fertilizer. With support from PKSF partner organizations, farmers in Cox's Bazar, Bogura, Thakurgaon, Bhola, Joypurhat, and other districts are being assisted in proper solid and liquid waste management.

Wastewater Pit

A pit measuring 4–6 feet in width and 4–5 feet in depth is built to collect water and waste. Filtered water from this pit can be used for irrigation or composting.

Cost: BDT 10,000–20,000



Solid Waste Management



Reuse of Used Litter

Wood shavings, rice husk, or sawdust are dried and disinfected for reuse, reducing costs and environmental risks.



Biogas Plant

Poultry manure and litter are being converted into biogas. The resulting slurry works as organic fertilizer.



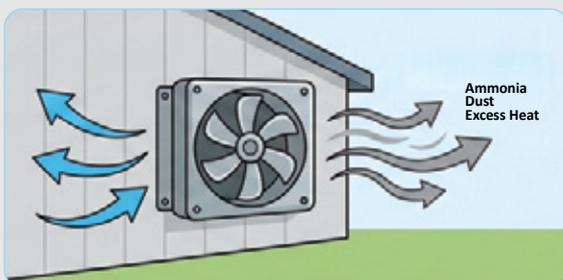
Tricho-Compost Plant

Using a Tricho compost plant, degradable waste and manure are being turned into high-quality compost within 30–45 days.

AIR POLLUTION CONTROL

Clean air inside poultry sheds is vital for bird health and productivity. Simple RECP measures—such as exhaust fans to remove ammonia and heat, and safe dead bird disposal pits—reduce contamination, control odors, and prevent disease spread. These low-cost steps create a healthier, more efficient farm environment.

Exhaust Fans



Installing exhaust fans helps remove ammonia gas, dust, and excessive heat.

Dead Bird Disposal Pit



A specialized, covered pit for disposing of dead poultry keeps the farm safe, reducing odor and disease spread.

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