

## New waste disposal system for poultry-fish culture

By T Muthu Ayyappan

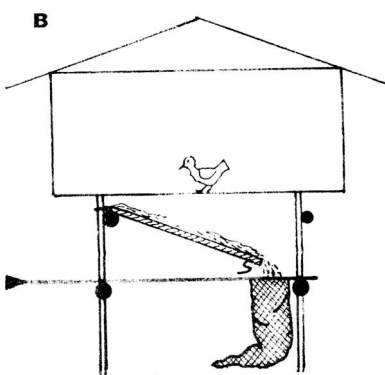
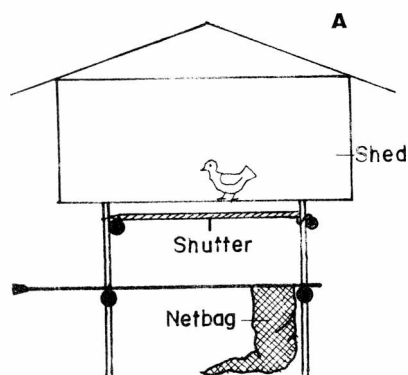
In poultry-cum-fish culture, the droppings of birds form a valuable source of manure for pond culture. It also serves as a direct food for the growing fish.

But bird wastes can not be left where these are dropped by birds in the pond because these just accumulate, becoming of little use to farmers. Collection of wastes from bird sheds and adding them to the pond is inconvenient and time-consuming. This article describes a new system that overcomes these disadvantages.

### Collecting bird droppings

To collect bird droppings, the shutter is released from the shed bottom. The slope of the open shutter makes the droppings fall into the net bag (figure B). The net bag is moved through the pond near the surface of the water. The long handle pole makes this work easy and convenient.

This process may be done periodically as required.



### Construction

The floor of the bird shed is made up of loosely packed frames of bamboo or other suitable local material. Below the shed floor is a shutter made up of closely packed frames. The shutter is fixed under the floor with a hinge on one side. A hook system is provided on the other side to lock or release the shutter when required. A net bag of small mesh size with rectangular mouth frame and a long handle is kept under the shed on two carrier rods. See figure A.

### Uses

- The application of this system prevents eutrophication as bird wastes are no longer accumulated at one site
  - Waste collection is convenient and time-saving
  - Frequent collection of wastes minimizes the risk of disease outbreaks in birds
  - Bird droppings can be spread more evenly throughout the pond as fertilizer or fish food
- ###

### Agri-nipa ... from p 10

- status of Philippine mangrove. *In: Mangrove Forest Ecosystem Productivity in Southeast Asia*. Biotrop Spl. Publ. No. 17, p 127-146
- PCARDD. 1989. Problem soils in the Philippines. Soil and Water Tech. Bull. Vol. VI
- Sakardjo D. 1982. *Tumpang sari* pond as a multiple use concept to save the mangrove forest in Java. *In: Mangrove Forest Ecosystem Productivity in Southeast Asia*. Biotrop Spl. Publ. No. 17
- Staples, DJ Vance and DS Heales. Habitat requirement of juvenile penaeid prawns and their relationship to offshore fisheries. *In: PC Rothlisberg, BJ Hill and DS Staples (eds). Second National Prawn Seminar, NSP2, Cleveland, Australia, p 47-54*
- Taguam G. 1991. Personal communication
- Urriza GIP, VV Babiera, P Evangelista and MR Recel. 1990. Characterization and management of problem soils. III. Management of acid sulphate soils for prawn production. Soil and Water Technical Bulletin VII (7): 1-18
- Van Breeman N and LJ Pons. 1987. Acid sulfate soils and rice. *In: Soils and rice*. International Rice Research Institute, Los Baños, Laguna, Philippines. ###

### Probiotics ... from p 13

- tion of food-borne bacterial pathogens by bacteriocins from lactic acid bacteria isolated from meat. *Appl. Microbiol.* 57: 1683-1688
- Montes AJ, Pugh DG. 1993. The use of probiotics in animal food practise. *Vet. Med.* 88: 282-288
- Sunilkumar M. 1995. Probiotics: an emerging concept in aquaculture nutrition and disease control. *Sea Food Export (July 1995): 5-9*
- Uma A, Abraham TJ, Jeyaseelan MJP, Sundararaj N. 1995. Influence of a commercial probiotic feed supplement on the growth, survival and immunity of Indian white shrimp *Penaeus indicus*. Tamilnadu Veterinary and Animal Sciences University, India ###