

Technical Bulletin #38:

How to Prepare an Aquaculture Pond

The best way to begin preparing a pond is to drain and dry it. However, not all ponds can be drained and/or dried. While drying the pond is a better way to prepare a pond, one that cannot be drained or dried can still be prepared. Each step in the procedure below will indicate if it applies to a dry pond, a wet pond, or both.

Step 1: (Dry Pond)

Drain and Dry Pond

Drain pond completely (Figure 1) and let it dry until the soil in the bottom cracks and is firm enough to stand on (Figure 2).



Figure 1: A freshly drained pond



Figure 2: Properly cracked and dried pond bottom

Step 2: (Dry Pond / Wet Pond)

Remove Trash, Obstacles and Aquatic Plants

Trash, such as plastic bags, in the pond provides places for predators, parasites and disease-causing organisms to live (Figure 3). Additionally, floating trash can trap pelleted feed and prevent it from getting eaten by the fish.

Remove anything that will make it difficult to manage and harvest the pond (Figure 4). Especially things like stumps, large rocks, and bushes.

Remove all aquatic plants (Figure 4). They will limit the amount of light that plankton can receive, reduce the amount of oxygen in the water, and increase the amount of water that evaporates from the pond. Aquatic plants are not able to be used by most fish as food.



Figure 3: Remove trash from pond



Figure 4: Remove obstacles and aquatic vegetation from pond

Step 3: (Dry Pond / Wet Pond) Sterilize the Pond

Before filling the dried pond with water apply burnt lime to any puddles or standing water in the pond to kill any insects or fish predators hiding in the puddles.

Mix the burnt lime in a bucket with an equal volume of water before applying it to any standing water in the bottom of the pond (Figure 5). Use a ladle or small bowl to splash the burnt lime and water solution into all puddles or areas of standing water (Figure 6).

When using burnt lime to sterilize the ponds that cannot be dried apply 100 grams of burnt lime per cubic meter. Mix burnt lime and water in a bucket and spread the mixture evenly over the surface of the pond (Figure 7). Use pH paper to test the pH of the water, with the goal of reaching 11 or higher (Figure 8). If the pH is not at least 11, continue to apply burnt lime until it is.



Figure 5: Mixing burnt lime in a bucket



Figure 6: Burnt lime applied to dry pond



Figure 7: Sterilizing a pond that could not be drained



Figure 8: pH indicator paper. Color indicates a pH of about 3.



Warning: Burnt lime can cause eye damage and chemical burns. Wear gloves when mixing burnt lime and water. Stand upwind when handling burnt lime to minimize how much of the powder gets on your body. If burnt lime gets on your skin, or in your eyes, flush immediately with lots of fresh clean water.

Step 4: (Dry Pond) Fill Pond with Filtered Water

When filling the pond it is important to avoid introducing fish from the water supply into the newly prepared pond. Tie a large screen or cloth bag securely to the end of the filling pipe (Figure 9) to prevent small fish and predators from entering the pond. The bag should be large enough to allow the water to pass easily. The bag should be inspected carefully before each use to ensure that there are no holes or tears. Finally, tie the bag onto the pipe or hose securely so that it does not leak or fall off.



Figure 9: Cloth filter bag attached to inlet pipe

Step 5: (Dry Pond / Wet Pond) Fence the Pond



Figure 10: Properly fenced pond

so that fish are not able to get under it. The fence will also prevent fish from escaping and minimize fish losses if there is flooding.

Build a low fence around the pond (Figure 10). This fence will prevent air breathing “black” fish from climbing out of the pond during rain storms. The fence will also prevent predatory fish such as snakehead and walking catfish from entering the pond and eating the fingerlings. Be sure to bury and stake down the bottom of the fence

Cambodia HARVEST

No. 46 Street 310 | Sangkat, Beong Keng Kang 1
Khan Chamkamorn | Phnom Penh, Cambodia
Tel: 855 (0) 23 996419

This bulletin is made possible by the support of the American People through the United States Agency for International Development (USAID). The content is the sole responsibility of Fintrac Inc. and does not necessarily reflect the views of USAID or the United States Government.