

Keep the Pond Cycle Spinning

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It takes balance to ride a 2-wheel bicycle and balance is required to keep the pond cycle spinning. This nitrogen cycle must keep spinning for the health of the pond and its fish.

Here's how it works:When fish eat, they excrete waste that creates ammonia. Decaying debris also adds ammonia to the water. Ammonia is toxic to fish. Bacteria called Nitrosomonas convert ammonia into nitrite. Then another bacteria called nitrobacter converts nitrite into nitrate. Nitrate is like food for algae and aquatic plants. They use it to produce chlorophyll. Then fish eat the plants, which starts the cycle spinning once more.

"The cycle of a pond is very important," said Jack Colman, president of Aquatics Biotechnologies in Camarillo, Calif. "That's why it's important to have a filtering system. A mechanical filter filters out the debris, while the biofilter helps good bacteria colonize and consume ammonia and nitrites."

Mechanical filters can be as simple as a pump pulling water through a fine screen. UV light zaps algae in a way that it can no longer reproduce. A biofilter is a small structure with media in it to culture the bacteria, Colman said. "That way, bacteria has a surface to adhere to."

While a pond can keep itself clean, it needs help when several factors occur, Colman said. These include: Too many fish
Overfed fish
Not enough plants
Hot temperatures

Pond keepers can counterbalance some of these factors by: Providing adequate mechanical and bio filtration. Regularly testing the water. Adding fish slowly. Partially changing the water regularly (about 20 percent every month).

"We're always coming up with new technology," Colman said. "What's important is keeping the cycle going, which keeps a pond healthy."