



“How To” Series: What’s with All the White Foam on My Pond?

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In this “How To Series,” we will identify the causes and solutions to the appearance of white foam on a koi pond and/or water garden. The timing and the severity of the foam build-up provides visual clues to whether it is a single cause or a combination of contributing issues. Fear not, your fish are not going to die from the foam.



photo 1



photo 2

Let’s Take a Look at the Following:

- Changes in the Water Chemistry
- Explanation of Terminology
- How Spawning Fish Contribute
- How Excess Organic Matter Contributes
- Other Potential Contributors
- Solutions

1. Changes in the Water Chemistry

Foam appears when there is a change in the surface tension of the water. Think of water tension as a “skin” between the pond water and the air above. Dissolved organic matter from decaying plants, and proteins from fish waste and their spawning activities, act as a surfactant that reduces the surface tension. This process allows air to mix with the water to create bubbles or foam. In mild cases, the foam will first appear mostly where the water is agitated around waterfalls.

2. How Spawning Fish Contribute To Foaming

Sometime in mid to late May and June, koi become more active with the warmer water. When temperatures warm up to between 65-70 degrees, the male koi become aggressive during spawning season as they chase the females, knocking them into walls and rocks to release their eggs.

This aggressive thrashing around stirs up the water while the fish release more slime coating, hormones, eggs, and sperm, adding to the proteins in the water. This action usually occurs in the early morning hours before the sun heats up the water. **Meaning, the amount of foam on your pond could be barely there the night before (photo 1), but by morning, the whole pond could be covered. (photo 2) In most cases, once the spawning season is over, the foam usually disappears.**

Explanation of Terminology

All living things are made up of **organic** compounds or **organic matter**, which are molecules built around the element **carbon**. There are four main types of macromolecules found in living organisms: **Proteins, carbohydrates, lipids and nucleic acids**. For this topic, we refer to **organic matter** from decaying plants, fish waste, leaves, algae, etc. and higher levels of **proteins** from excess fish food, fish slim coat, and spawning activity.

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3. How Excess Organic Matter Contributes

Even ponds without fish can see foaming conditions from high levels of decaying organic matter. If this persists, it indicates an underlying imbalance that contributes to poor water quality that needs to be identified and addressed. These problems could be fixed by cleaning out a build of decaying leaves and other plant material, a buildup of muck, over feeding of fish, to many fish, filtration needs cleaned or not enough filtration, to name a few.

In springtime, before plant life has grown enough to assist with processing nutrients for pond balance, it is important to do a spring cleaning and introduce beneficial bacteria treatments.

4. Other Potential Contributors

- Overfeeding the Fish (excess protein)
- Poor Quality Fish Food
- Leaves / Muck
- Introduction of Fertilizer
- Plants or Runoff
- Insufficient or Dirty Filtration Systems
- Algae Blooms
- Overall Change in Water Quality



5. Solutions / Action Steps

- A. A mild case: It should clear up on its own
- B. For more severe cases:
 - Apply a defoamer treatment (1 oz per 1,000 gallons)
 - Spring cleaning – remove leaves and clean filters
 - Add beneficial bacteria – apply weekly for one month
 - Remove muck build-up – use a sludge remover
 - Do a 25% water change – reduces organic matter
 - Conduct water tests – identifies any other issues

EasyPro Product Solutions



Defoamer

Concentrated formula - apply 1 oz per 1,000 gallons of water. Safely eliminates foam by re-establishing the water's surface tension.

16 oz (DEF16) and 1 gallon (DEF128)



All Season Bacteria

A proven blend of beneficial pond bacteria that promotes healthy ecological balanced ecosystems by reducing toxins, problem causing nutrients and murky water.

16 oz (ASB16), 32 oz (ASB32), 1 gallon (ASB128)



Sludge Remover Bacteria (Dry)

These easy-to-apply 1 oz water soluble packs of beneficial bacteria reduces organic bottom sludge/muck and odors in water temps down to 45°F. 12 ct (SRB12), 24 ct (SRB24), 5 lbs (SRB80), 10 lbs (SRB160)