



BioBoost Nest™
Where Bacteria Loves to Live

What Do I Do About Duckweed?

Lower your nutrients....over the long term.

WHAT IS DUCKWEED?

Common duckweed (*Lemna minor*) is an invasive aquatic weed of small-leaved, free-floating plants, and is often accompanied by another small-leaved nuisance weed, watermeal (*Wolffia* spp.).

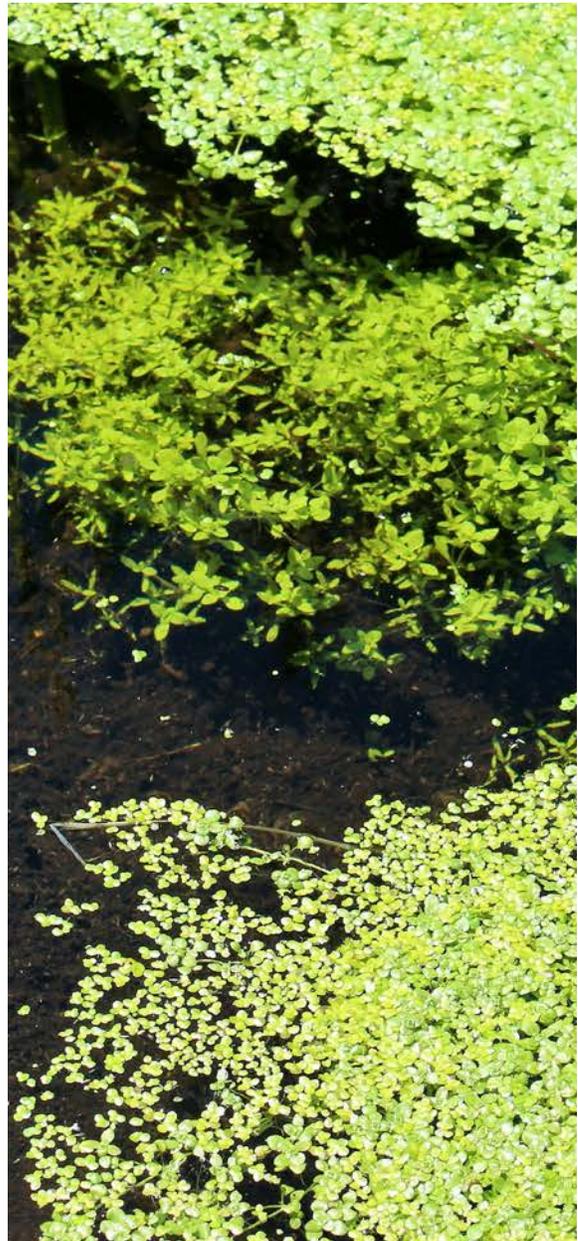
It can quickly cover the surface of a pond, choking out desirable aquatic plants and depleting oxygen levels, leading to fish deaths. Controlling duckweed is important for aesthetic reasons and the health of aquatic life.

WHERE DOES DUCKWEED GROW?

Duckweed is usually found in water with a high nutrient load, which provides its primary food source. High nutrient loads typically arise from dead and decaying aquatic plants, algae and livestock, lawn clippings and fertilizer runoff.

Ponds with a buildup of bottom muck – black ooze that results from decaying vegetation – are particularly susceptible. Older ponds with minimal aeration are vulnerable, since muck takes time to develop and will accumulate more in low-oxygen environments.

Duckweed is also commonly found in water bodies that are visited by Canadian geese.





HOW DO I GET RID OF DUCKWEED?

The bad news is eliminating duckweed and watermeal may take years. Getting rid of duckweed depends on eliminating the conditions that allow it to thrive through nutrient reduction, increasing waterflow, manual removal of vegetation, disruption of sediment buildup and possibly chemical duckweed killer. However, the best treatment is prevention and early intervention.

If you have an infested pond, you want to incorporate these techniques:

- Increase your beneficial bacteria population size and strength to combat excess nutrients.
- Three ways to support beneficial bacteria are aeration, microbial inoculation and bacterial habitats such as BioBoost Nests.
- Remove as many leaves and other decaying vegetation from the bottom of your pond as possible to decrease muck buildup. You can stop more leaves from reaching the pond floor by netting the pond in the fall.
- Manually remove any vegetation that has died off from herbicidal applications or from its natural lifecycle as soon as possible so it doesn't add to the water's nutrient load.
- Ensure any fish or other livestock that have perished are removed from the pond right away so their decay doesn't create additional nutrients.
- Add aeration or increase your existing aeration. Water with continual surface movement is less susceptible to duckweed takeover, and aeration that creates turbulence at the pond floor will discourage additional sediment buildup.
- Manually remove duckweed and watermeal, starting in the early spring, before new plant growth takes off. Push masses of plants to edges of pond and use a net to scoop the duckweed out. While this alone will not eliminate the weed, it will reduce its amount.
- Add or encourage natural duckweed predators, such as koi, goldfish, carp and certain waterfowl.

If the growth persists despite preventative measures or the infestation is severe, you may need to use a chemical duckweed killer.

WHAT'S WRONG WITH USING CHEMICALS?

The use of herbicides in certain situations may be needed, in conjunction with preventative measures that focus on reducing nutrient load in the water column. However, herbicidal applications can often cause a vicious cycle of chemical dependency.

Excess unwanted aquatic plants are typically the result of water containing high nutrients. The vegetation is not the problem, but rather a symptom of the underlying issue of more nutrients being produced than the beneficial bacteria present can consume.

When an herbicide is applied and the vegetation begins to die off, the decay process releases more nutrients into the already nutrient-loaded pond. More nutrients is the last thing you want when trying to reduce vegetation like duckweed. The nutrient spike triggers a regrowth in weeds, spurring the application of more herbicide, and the cycle repeats over and over again.

If you can reliably remove vegetation before it begins to decay, some herbicidal use can be helpful in removing invasive plants.

You may also want to use herbicidal treatments in conjunction with a biocatalyst that damages the plant's defenses against attack. A biocatalyst like Naturalake's Aquasticker works in multiple ways to increase an herbicide's effectiveness.

A LONG-TERM APPROACH

Duckweed cannot be controlled by aeration or manual removal alone, and chemical use can backfire. The most reliable approach is to lower nutrient load in a sustainable way by reducing environmental inputs and boosting the beneficial bacteria that consumes nutrients in your pond.

Call or email us to learn more—we look forward to answering your questions.

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