

COVERING YOUR POND

A technology to address water quality issues
Research Factsheet COHA7-E

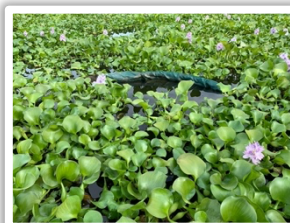
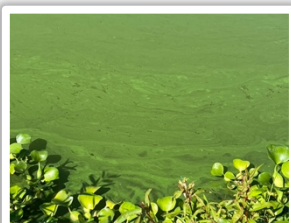


What kinds of covers are available?

Traditionally, ponds were not covered. But covers or shading/netting are available to prevent waterfowl and debris from entering ponds and reduce light that encourages phytoplankton growth. Covers can be supported or floating solid geotextiles, plants, floating islands with plants, and floating covers comprised of a customized number of individual abutting plastic balls or discs (e.g., Bird-X bird balls). Floating islands can be hexagonal in shape, with multiple units fitting together to effectively cover ponds.

When is covering useful?

Not only does covering a pond prevent birds from landing (and therefore, from depositing their wastes in your pond), covering also prevents light from entering the water column. Cyanobacteria and algal blooms depend on warmth and high light levels, so covering ponds is very effective in decreasing the likelihood of a bloom. Research has demonstrated that even with higher nutrient levels present in outdoor return silos, using bird balls significantly prevented algal and cyanobacterial growth. A pond covered with water hyacinths also showed significant improvement in turbidity and cyanobacterial levels within one season. Note that aeration is still recommended for covered ponds to help keep them oxygenated.



The same pond on the left with minimal coverage at mid-summer, compared to late summer when plants fully covered the surface.

For more information, contact jwest@phytoserv.com.



Bird Balls covering a silo surface.



Floating island (PhytoLinks™) in spring, before plant growth evident.

What are the drawbacks?

Floating islands may be more effective in ponds with high nutrient content, and it is important to harvest excess plant biomass each year to ensure there is room new growth to continue nutrient uptake.

If surface plantings like water hyacinth are used, ensure there is no risk of spreading the plants to other surface waters. While these plants generally don't overwinter well in Canadian climates, some regions may be warm enough for these plants to be invasive. Again, biomass will need to be harvested to prevent re-introducing nutrients from decomposition into the pond.

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