

Maintaining your pond

BY MICHAEL POWERS



Surface water sources such as rivers, ponds and reservoirs for storing runoff water are almost always contaminated and should be disinfested before use in irrigation.

PHOTO BY JAY W. PSCHIEDT

NURSERY OPERATORS understand that clean water is essential to healthy stock and continued financial sustainability.

In addition, water leaving a property — either as surface water or groundwater — can impact the quality of water needed for others to use as drinking water, recreation, irrigation, and for support of the environment.

With the density of nurseries in some areas of the Willamette Valley, the potential for cumulative impacts from these operations on the quality of water increases in relation to the number of operations within an area. One element to ensure clean water for everyone's use is nursery pond maintenance.

All nursery operators understand the challenge and necessity of successfully addressing potential pond issues before they become bigger problems.

There are a number of issues nursery operators should consider in management of nursery retention and storage ponds. Retention and storage ponds have the potential to accumulate contaminants (such as soil and nutrients) from

nursery yards. Recycling these waters through irrigation on the nursery, adjacent croplands and pasturelands in the summer and fall prior to the winter rains is an ideal way to limit movement of potential contaminants from nurseries to Oregon's streams.

Since winter rains typically exceed the storage capacity of nursery ponds, water collected over the summer in these ponds should be completely drained and applied to the land prior to the significant storm events. This minimizes comingling of accumulated contaminants in summer runoff with the cleaner water from winter rains. This is particularly important where ponds have the potential to flow directly into a stream or a ditch that connects with a stream.

Another potential issue is invasive weeds such as water primrose, parrotfeather and especially yellow flag iris. These can clog drainages, displace beneficial native aquatic plants, and spread into ditches and other waterways.

Invasive weeds lead to higher maintenance and repair costs as well as a reduction of water quality. Plus, as invasive weeds spread, they can

greatly impact irrigation system efficiency throughout the watershed.

Ensuring dam and pond liner integrity is another way producers can help protect water quality. Repairing cracked dams prevents gully erosion and, consequently, the introduction of sediments to waterways. Split and leaky liners can pollute groundwater and, in some cases, have affected the purity of drinking water in wells and aquifers.

When you consider how best to manage your nursery pond for water quality:

- Be sure that berms are free of weeds and not “shrinking” because of soil loss.
- Provide aeration to prevent stagnation.
- Consider pond water levels in case of storm events.
- Apply all pond water to adjacent croplands or pasture-

lands before winter.

- Reuse or apply pond water agronomically.
- Read and follow pesticide label directions.
- Regularly monitor pond water quality.
- Avoid emptying pond water to streams or ditches year round.

Taking care to ensure that nursery ponds are proactively maintained and operating at peak efficiency not only prevents negative water quality impacts, but also helps protect the bottom line by eliminating costly repair or weed removal expenses.

Oregon has established laws to protect water quality, including laws that address agricultural activities that can negatively impact water quality, such as nursery pond management. However, Oregon has recognized that for most issues, landowners are the best source of measures to protect water quality.

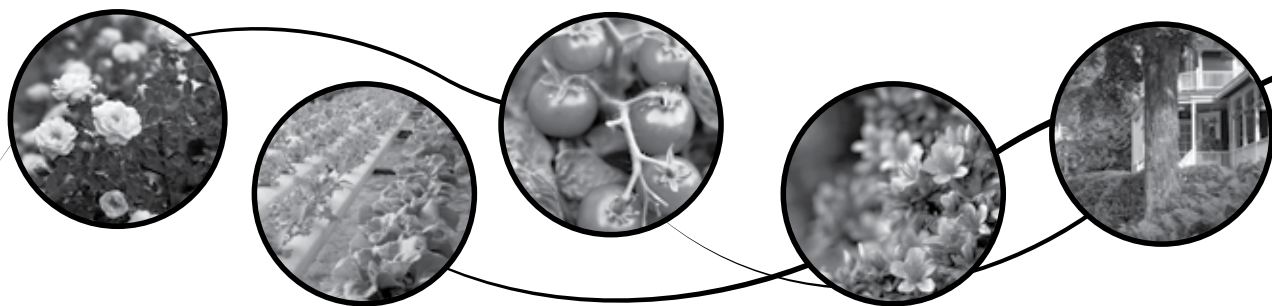
While the Oregon Department of Agriculture’s Agricultural Water Quality Management Program regulates agriculture to ensure production activities do not pollute, ODA recognizes that the best solutions come through cooperative and voluntary approaches by landowners with the assistance of local soil and water conservation districts, watershed councils, OSU Extension and other local natural resource services. These are the most effective means to achieve state water quality goals.

Local soil and water conservation district officials can help with technical assistance and, in some instances, help obtain financial assistance for on-the-ground improvements that prevent water pollution.

The ODA website (www.oregon.gov/ODA) is a resource to learn more about Oregon’s Agricultural Water Quality Management Program and your local soil and water conservation district. ©

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