

OPINION

Agriculture isn't the "bad guy" in Florida's clean water fight | Opinion

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When it comes to exposing our country's systemic vulnerabilities, COVID-19 is unfortunately a gift that keeps on giving.

Right now, our food source is in the spotlight as Florida farmers face a looming agricultural catastrophe of rotting, uneaten produce while, ironically, the country braces for possible food shortages.

The pandemic is giving us a huge reminder of the importance of Florida's agricultural industry in the chain of America's food supply. Florida growers cannot stop growing, because we cannot stop eating. Sadly, this is an often-missed fact when Floridians get into the ever-present environment versus food production debate.

Due to the COVID effect, this may be a good time to reconsider the way some of us view agriculture as the only "bad guy" when it comes to nutrient water contamination. Blue green algae blooms, red tides, and bleaching coral reefs are challenges we face because of our past failures as a state to implement a statewide, comprehensive water treatment system that catches contamination from all sources.

To steal a line from the COVID-19 pandemic, we are all in this together.

Last year, Gov. Ron DeSantis and the Florida Legislature took unprecedented action to identify new technologies to clean up our contaminated rivers and lakes. Thanks to their leadership and a year-long gauntlet of information and proposal requests, the Florida Department of Environmental Protection now has access to new tools and technologies which they can utilize. Among them is a large scale chemical treatment capable of removing thousands of tons of nutrients.

Consider the current situation with agriculture. Today, nearly all of the responsibility and cost for nutrient removal falls on the shoulders of individual growers through a system of required best management practices, or BMPs, that are unfortunately neither measurable nor enforceable. Those BMPs, coupled with water impoundment and biofiltration efforts, have done almost nothing to meet the magnitude of the state's nutrient removal needs.

For example, according to Florida's Basin Management Action Plans (BMAPs), there should be no more than 140 tons of phosphorus loading into Lake Okeechobee every year if it is to remain healthy and cyanobacteria free. However, the current phosphorus load has been reported at an astounding 2,380 tons per year. That means that more than 2,000 tons of phosphorus needs to be removed from the waters feeding the lake every year. That does not even include the needed removal of nitrogen.

Clearly, agricultural BMPs are not coming anywhere close to meeting the demand, despite growers' best efforts.

The only technology that can handle this level of nutrient removal is chemical treatment. Most industries across the country clean their wastewater by using some form of chemical treatment prior to discharge. In many cases, water treatment is accomplished through private and public partnerships. Why should Florida's nutrient contamination be any different?



Kids swim in the main head spring of Gilchrist Blue Springs State Park in High Springs, Fla., June 28. With \$100 million in the budget for springs restoration this year, local springs advocates push for the money to be spent the right ways to save Florida springs. (Photo: Brad McClenny/The Gainesville Sun via AP)

The bad news here is that it would be impractical, overly burdensome and cost prohibitive for each farm to attempt to collect its own runoff and chemically treat it for discharge.

The good news is that the state already has a system of collection canals and drainage that could be easily adapted for chemical treatment that has already been identified and positioned to remediate our waterways. The cost should not have to be shouldered by the growers themselves.

Chemical treatment is safe for fish, wildlife, and the entire ecosystem since it can be applied, and then removed, in closed systems with little impact on the environment. Contaminated water goes in, and environmentally-safe, clean water comes out. It is scalable to volume, and affordable.



Thomas D. Waite is professor emeritus and former dean of engineering at the Florida Institute of Technology. (Photo: Provided)

More than likely, it would take fewer than a half-dozen water treatment facilities on small canals or rivers to meet the entire nutrient removal requirements, regardless of the source, for Lake Okeechobee. This strategic approach of a state-developed treatment system will allow our growers to focus on what they do best: feeding us in times of plenty, and in times of great need.

Our state now has more effective environmental technologies available that can clean up our water while letting us grow the food we need. We can do all of this together, and that is good news.

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