

Water Quality Update

Crop Genetics May Reduce Phosphates

After isolating a particular gene in a fungus that is known to help plants ingest phosphates, a team of plant molecular biologists at the Noble Foundation in Oklahoma have attracted worldwide attention. The research work currently is focused on transferring the isolated gene to agricultural crop plant varieties so that farmers can reduce the amount of phosphate fertilizer applied to the soil.

Over the past three years, the Noble researchers have studied a mycorrhizal fungi that infects plants' roots while enhancing the transpiration of phosphates. Before the research began, noted Richard Dickson, head of the foundation's plant biology division, no one really knew how the fungi worked. The team led by Noble scientist Maria Harrison has attracted international acclaim.



Initially published in the scientific journal *Nature*, the research was featured in a subsequent interview with Harrison for broadcast to 20 countries by the British Broadcasting Corp.

"I think this is really exciting," said Dickson, who refers to excessive phosphates from fertilizer application as a form of pollution. Phosphate-laden runoff from farm fields has become a common quality problem in both surface and ground water supplies across agricultural areas, he said.♦

[Editor's Note: Phosphate is not usually considered a ground water pollutant.]

- U.S. Water News, Mar., 1996 Vol. 12 (9)

Indian Tribe Files Lawsuit Against Tenneco Oil Co.

In February, the U.S. Department of Justice filed a lawsuit in an Oklahoma City federal court on behalf of the Sac and Fox Nation against Tenneco Oil Co., accusing the company of polluting the tribe's water supply.

The lawsuit states that the case was brought against Tenneco at the request of the U.S. Interior Department and the U.S. EPA. The government is seeking punitive damages, including "restitution in an amount to determined at the trial," and an order requiring Tenneco to stop the pollution and provide the tribe with a permanent replacement water supply.

The case comes almost 19 years after tribal officials first asked for federal legal help in response to saltwater pollution of their water wells on reservation land in Lincoln county.

Tom Hayes, spokesperson for Houston-based Tenneco Inc., which sold Tenneco Oil's interests and dissolved that company in 1988, said the firm was aware the federal government had been preparing legal action.

However, he said the government had not been cooperative in providing information on the case. "We're just not aware of evidence that suggests we did cause (the pollution)...Now that they've actually brought the lawsuit, it's going to provide us an opportunity to see what, in fact, evidence is out there. But it's a shame that they wouldn't provide it to us before suing," Hayes said.

"I think primarily it was carelessness" that led to the pollution of the reservation's water, said Dora Young, principal chief of the Sac and Fox. "About 30 years ago, our tribal members...noticed that the vegetation was dying out and the water was just

becoming undrinkable, and of course as the years went on it got worse,” she said.

Tenneco has not been active on tribal land for several years and the number of active oil wells there has also dropped. ♣

-adapted from *Texas & Southwest Environmental News*, Mar. Vol. 6(1)

Big Wewoka Creek Project Funded

The U.S. Department of Agriculture has announced an award of \$135,000 to Oklahoma for the Big Wewoka Creek Watersheds Water Quality Incentive Project (WQIP) in Hughes and Seminole counties. The award is the result of efforts of a county team consisting of the Consolidated Farm Service Agency (CFSA), Natural Resources Conservation Service (NRCS), and the Oklahoma Cooperative Extension Service (OCES). Funds are to be used for incentive payments to encourage producers to adopt new practices to reduce agricultural nonpoint source pollution in their farm operations.

The project area consists of six sub-watersheds to Wewoka Creek: Long George, Jacobs, Tiger, Yeager, and two unnamed watersheds. Wewoka Creek is an important contributor to the North Canadian River and Lake Eufaula and the site of a greatly expanding swine production industry. This industry produces approximately 11,500 feeder pigs and other swine each year, with numbers expected to increase to over 135,000 head in the next few years.

Through a combination of ongoing producer education programs and the WQIP incentive payments, protection of these valuable water resources is anticipated.

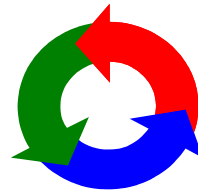
Water quality concerns are associated with expansion of the swine industry and the production of manure. If managed carefully, the manure is a valuable resource, suitable to improve forage production and improve grazing and cattle production. If mismanaged, however, nitrogen and phosphorus from the manure can contaminate water resources. Proper management involves a higher level of management than has traditionally been employed in the area. The WQIP payments will promote practices such as recordkeeping, pasture and hayland management, grazing management,

livestock exclusion, waste utilization, and well testing, among others.

Unlike other USDA Conservation Programs, WQIP does not pay for construction of structures. Instead it offers incentives to induce farmers to change management. Through the program producers will learn to manage waste application, protect riparian areas, and protect the quality of our valuable water resources. ♣

RESOURCE SPOTLIGHT

Managing Leftover Wastes: A guide to Recycling, Reuse, and Disposal of Waste in the City of Oklahoma City



With spring newly arrived some of us are looking for ways to defy the laws of physics...or, entropy at the very least! Put some order into this disordered universe, or merely your garage by consulting this 22 page guide produced by the city of Oklahoma City's Public Works Department, NPDES section. This document lists the location, business hours, and phone numbers of drop off centers, buy back centers, and paid disposal centers in the Oklahoma City area. It is divided into sections on recyclable wastes, ranging from appliances to tires, and non-recyclable wastes such as pesticides and paints.

It's a "must have" for county agents near the Oklahoma City area.

Contact the city of Oklahoma City, NPDES section to request a copy.

If you need a copy of any articles, contact "Hannah Barbara Fulton at (405) 744-5653

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