

Agriculture by Robert L. Baker

What ground water pollution?

Once again, the environmentalists are exposed beating the drum about a "problem" which doesn't really exist.

Media scare stories about the pollution of ground water in the United States are alarming the public unnecessarily about the sources of ground water contamination problems. The reports are misinterpreting scientific studies in such a way as to bolster the arguments of those zero-growthers who are out to shut down the American family farm.

Richard Fawcett, an agriculture consultant and 13-year veteran coordinator for the Iowa State University Extension Pesticide-Water Quality Program, says that the popular notion that agricultural pesticide applied by farmers to crop land leaches through the soil and contributes to ground water contamination, may not be anywhere near the problem that some radical environmentalists would like the public to believe.

"The public perception is that farmers need less chemicals or none at all," Fawcett says. But this is just plain wrong, and the scientific research shows it clearly.

Scientific data just don't support the idea that agriculture is massively polluting underground water supplies through leaching.

Fawcett says the most commonly held belief is that pesticides get into ground water through leaching with normal use, sinkholes and agricultural drainage wells, leaching from mixing areas, and back-siphoning of spray equipment.

Ground water quality studies, like that being conducted for the last nine years in the Big Spring Basin of Northeast Iowa by the Iowa Geological Survey, have turned up good data

on the problem associated with areas with karst (very porous) topography.

In most ground water studies in Iowa, atrazine was the most commonly found agricultural chemical; it is the second most abundantly used herbicide in the nation, and Iowa is one of the top states in the use of farm chemicals. The eight-year average concentration of atrazine found in the Big Spring Basin was 0.36 parts per billion (ppb)—a full 88% below the Environmental Protection Agency's lifetime health advisory level of 3 ppb for atrazine. Hardly a life-threatening level!

In other studies conducted by the Iowa Department of Natural Resources (DNR), a sampling of 853 wells across the state found that only 8% showed any pesticide residues, and almost all of that was the herbicide atrazine. In an Iowa DNR survey of public water supplies, only 33 public wells contained traces of atrazine (as the only pesticide) with average concentrations amounting to 0.42 ppb; the highest concentration detected was 1.3 ppb, well below the 3 ppb EPA standard.

Where three wells exceeded the EPA standard, Fawcett went back and reexamined those sampling sites. In 80% of those cases, agricultural chemical mixing had taken place near the sampled well, affecting the final reading. "When you rinse out a sprayer so many times a day for 20 years, you build up the concentration," Fawcett says.

In a study by the Illinois Department of Natural Resources, researchers randomly sampled 343 wells and

didn't detect a single pesticide. In another sampling, 450 wells that were shallow and potentially vulnerable to agricultural chemical contamination, only three tested positive for such substances. And all three of these wells were sites where product mixing and loading had taken place.

An example of the environmentalist propaganda is a recent report released by the National Research Council, entitled "Alternative Agriculture." The report would lead the unsuspecting public to believe that agricultural chemicals and fertilizers are seriously polluting the ground water; but when closely scrutinized, the claim goes up in smoke.

For instance, the report states, "A survey by the U.S. Geological Survey (USGS) of 1,663 counties showed 474 counties in which 25% of the wells tested had nitrate-nitrogen levels in excess of 3 milligrams/liter. . . . In 87 of the 474 counties, at least 25% of the sampled wells exceeded the EPA's 10 milligrams/liter standard for nitrate in drinking water. Prolonged exposure to levels exceeding this standard can lead to methemoglobinemia (oxygen deficit in the blood), although reported instances of this condition have been rare."

This sounds pretty dangerous. But what it actually says, is that a minimal 0.07% of the wells tested showed an insignificant 3 to 10 milligrams of nitrates per liter in ground water, and 0.013% of the wells in the 1,663 counties tested had nitrate levels higher than 10 milligrams per liter.

If a person were exposed to such levels every day of his life, he would stand a chance of getting oxygen deficient blood. In other words, only a fraction of 1% of the wells tested in this survey even showed detectable levels of nitrates, and those that did are not likely to cause any harm.