

JUN Ground-water pollution seen as irreversible

By GEORGE ANTHAN

The Register's Washington Bureau Chief

WASHINGTON, D.C. — A new report by a national panel of experts portrays the nation's ground-water contamination problem in grim terms and emphasizes the complex technical, economic and political barriers to finding solutions.

The Congressional Office of Technology Assessment's report ties agricultural practices solidly to contamination of the water supply on which half the nation's residents depend for drinking.

Ground water, the report says, "is largely beyond the reach of remedial actions and contamination is essentially irreversible."

Thus, contaminants must be prevented from entering water resources. But this course presents a host of problems which neither Congress nor the Bush administration has begun to effectively address, the report makes clear.

OTA, which advises Congress on scientific and technical issues, assembled an 18-member panel, including Donald Duvick, recently retired

WATER

Please turn to Page 10A

Pollution of ground water found irreversible; many factors blamed

1990
WATER

Continued from Page One

as vice president for research at Pioneer Hi-Bred International; Richard S. Fawcett, a consultant from Huxley, Ia.; George Hallberg, Iowa state geologist, and Dennis Keeney, director of the Aldo Leopold Center at Iowa State University.

OTA blames much of the pollution of ground-water supplies on wasteful and inefficient application of agricultural chemicals by commercial applicators and farmers who lack adequate training.

There are no effective national standards for training and testing of chemical applicators, OTA said, and state rules vary widely.

"Only an estimated 1 percent of applied agricultural pesticides reach the desired target," the report says, "implying that nearly 99 percent then may be lost to the environment."

Also, it said, there is a lag time in chemicals moving slowly through soil to appear much later in water, there

"Only an estimated 1 percent of applied agricultural pesticides reach the desired target."

— Office of Technology Assessment report to Congress

is a lag time in research leading to effective prevention measures, and there is a lag time in adoption of such practices.

There have been major improvements in recent years in pesticide efficacy, OTA says, but "little advantage is gained in developing and using products with greater efficacy if the smaller amounts applied per acre do not arrive at the target pest."

Chemical application equipment and technology have "not kept pace," the report continues, since large farm equipment manufacturers don't consider this to be "an important market segment...."

This is despite strong evidence that direct injection of fertilizers and pesticides into the soil shows promise for improving efficiency, for cutting volume and for significantly reducing environmental damage.

The ground-water contamination issue has resulted in increased attention focused on agricultural practices by a wide range of environmental, conservation, consumer and scientific groups.

The House and Senate agriculture committees, in writing a new farm bill, have moved haltingly to address the problem. The Senate committee has adopted a plan by Senator Tom Harkin, D-Ia., under which the federal government will help farmers develop management plans calling for more efficient — and presumably less — use of chemicals.

But both committees have rejected calls for a tougher, regulatory approach to farm chemical use. Also rejected so far are calls for mandatory gathering of data on farm chemical use and on well-water quality.

Yet, only a massive, well-coordinated and financed national program of data gathering, education, training, research and regulation can offer hope of eventually reducing the level of contamination without damaging crop productivity, the report says.

"Prevention or minimization of ground-water contamination from agricultural sources is fraught with barriers," it says.

The pollution comes from tens of thousands of points where farm chemicals are used and stored. Cropping and tillage practices vary widely. And what happens to chemicals once they're applied depends to some extent on weather and on the environmental and ecological factors peculiar to the site.

Then, pest populations go through cyclic, if unpredictable, cycles, the report notes.

"The overarching question begging answer is how management of water, crops, soil, nutrients and pests can be integrated" to cut pollution without reducing productivity, it says.

Because agriculture is so diverse in the United States, "no one strategy is likely to be adaptable to farms of all types...." There is no technological "black box" that can be universally adopted....

While agreeing that farmers them-