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Guest Commentary

By Jon Swan

I was 6 years old when the topsoil of Kansas blew over the small southwest Iowa town where we lived. The year was 1935. All day long the sky was black as night. There was no sign of the sun. A severe drought, together with reckless plowing and planting practices, had left the topsoil of the Great Plains vulnerable to wind and rain. The first great windstorm struck South Dakota in 1933. Some farms in that state lost all their topsoil. The following year, a more powerful storm picked up and blew away a third of a billion tons of soil from fields in Montana, Wyoming, and the Dakotas; the huge cloud of dirt, dust and sand, moving at up to a hundred miles an hour, darkened the land all the way to the East Coast, finally coming down far out in the Atlantic. During the 1930s, the Great Plains acquired a new name: the Dust Bowl.

Loss of topsoil became a top-priority issue for the new Roosevelt administration. In September 1933, six months after Franklin Roosevelt was sworn in as president, he established the Soil Conservation Service (later to become the Natural Resources Conservation Service), which promoted contour farming and crop rotation, among other reforms. The Civilian Conservation Corps, established during the first month of the administration, set to work planting a belt of trees, which was designed to break the wind and hold water in the soil, which ultimately extended from the Canadian border to Abilene, Texas. Within less than a decade, CCC workers planted an estimated 3 billion trees. An emergency was recognized across party lines, and action was taken with astonishing speed.

Today, it is highly unlikely that the continuing loss of topsoil — carried off by flooding Midwestern rivers and the increasingly violent wind storms that sweep the Plains — will receive even passing mention by politicians of either party between now and the November elections. The issue isn't taboo; it simply doesn't exist on the radar of politicians.

Loss of topsoil is not as apparent today as it was in the 1930s. But it is happening, nationally and globally. Some 75 billion tons of topsoil are lost worldwide yearly, according to a study conducted by David Pimentel, a leading authority on soil loss. Soil loss within the USA accounts for an estimated 6.9 billion tons of the total. Meanwhile, to keep a diminishing amount of arable land productive, farmers have become increasingly dependent on chemical fertilizers.

U.S. farmers spend an estimated \$20 billion a year to make up for the loss of nutrients carried off by erosion, putting multinationals such as Monsanto and Sygenta in the position of playing the role of physicians whose profits increase as the health of the planet declines. An agriculture based on the equivalent of chemical steroids is not sustainable.

Meanwhile, it is unsettling to realize that topsoil is not a renewable resource. As scientists at the University of California, Davis, have pointed out, “The rate of soil formation is very slow: it takes from 300 to 1,000 years for nature to replace the soil that a field can lose to erosion in 25 years at a loss rate of 1 mm per year.”

In 1935, the state of Missouri, to cite only one example, lost 12 of its original 16 inches of topsoil. As David R. Montgomery points out in *Dirt: The Erosion of Civilizations*, “In the aftermath of the Dust Bowl ... the federal government began to see soil conservation as an issue of national survival.” It remains an issue of national survival, for what is at stake is the future of our food supply, of farms and of farm communities, a way of life. It is a global concern, as well, for as Montgomery writes, “Earth’s thin soil mantel is essential to the health of life on this planet, yet we are gradually stripping it off.”

At the same time that the USA is losing billions of tons of topsoil, irrigation and urban sprawl are dramatically reducing another nonrenewable resource: our aquifers. A U.S. Geological Survey Fact Sheet found that water levels in parts of the High Plains aquifer, which underlies more than 111 million acres of eight states, have declined by more than 150 feet as the result of increased irrigation since the 1930s. The findings of a recent study by researchers at the University of Texas, Austin, were summed up in a headline that read “Groundwater Depletion in Semi-arid Regions of Texas and California Threatens U.S. Food Security.” One of the semi-arid regions was the High Plains, famous for its amber waves of grain; the other, the California’s Central Valley, a major source for the nation’s fruit and vegetables.

With politicians, the press, and the pundits all looking the other way, it would seem that only a reprise of the Dust Bowl years will put such basic issues as earth and water back on the national agenda.

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