

The "Other" Atlantic Article

Chasing Topsoil With the ASCS

Editor's note:

Not all pages of the current Atlantic Monthly are taken up by the interview with budget director David Stockman. Overshadowed by the flap with Stockman is another article of equal interest to people in Boiling Springs; erosion of our topsoil and impoverishment of our farmers. It's the latter article we reprint below, shortened for space. Here, for your enjoyment, is the "other" Atlantic article.

IN TAZEWELL COUNTY, Illinois, about eight weeks before the corn came in, I climbed a barbed-wire-topped fence with Leroy Holtsclaw and Owen Ingram, and crashed into a jungle of cornstalks to see what they are doing to keep the Corn Belt from sliding away down the Mississippi River. The corn was seven feet tall to its tassels, and pollen rained on our heads as we bulled our way through the densely packed stalks, spreading a thick yellow haze through motionless air that felt five or ten degrees warmer than the air outside the field. Ingram, the U.S. Soil Conservation Service's man in Tazewell County, and Holtsclaw, his boss, the supervisor of a fourteen-county area in central Illinois, were much more adept than I at picking a path through the growth, and I fell behind them a few times, feeling a vague sense of panic at the prospect of being irretrievably lost no more than ten yards from my guides. I blindly followed the sound of the rustling corn and caught up with them only when they stopped to have a look at something they considered significant, which, fortunately, was fairly often.

We were on a sixteen-acre field of fabled Illinois topsoil—the kind responsible for 16 percent of the nation's corn crop, 17 percent of the nation's soybeans, and nearly a tenth of all U.S.

farm exports—and our tour was divided into two parts. First, the problem, which was in evidence on the western three fourths of the field. Ingram squatted to point out a rivulet between corn plants, a small but well-defined channel carved in the soil by moving water. A little farther on, he stopped to examine a grounded cornstalk, toppled by wind after water had washed the soil from around its roots. These were signs of rill erosion, one of the two major types of water erosion that plague the Corn Belt. (Wind erosion is not much of a problem here.) The other major type, sheet erosion, in which soil is washed away in very thin and fairly uniform layers, was not visible, but it was happening just the same, Ingram assured me. The field sloped from southeast to northwest, losing eight or nine feet in altitude every hundred feet, and, as we walked down the slope, the ground squishing audibly beneath our shoes, the soil grew progressively wetter, the rivulets larger, the felled stalks more plentiful. Some of the soil that was washing off this field would end up in the Gulf of Mexico at the mouth of the Mississippi, traveling via Lick Creek, to the north, and the Illinois River, to the west, carrying polluting agricultural chemicals as it went; some would fill in watercourses along the way, causing floods in low-lying roadways and croplands during and after heavy rains. The rest we found in a sad, barren expanse on the western edge of the field, near the inlet to a drainage lake: here only a few nitrogen-starved corn plants, stunted and yellow, poked up bravely through a cover of soggy black muck. I pushed my middle finger to its second knuckle into the muck. According to the best estimating method available, Ingram said, each of the twelve acres in this part of the field was losing soil at the rate of about thirty-two tons per year.

Having seen the problem, we turned to the east for the solution. Immediately adjacent to this twelve-acre plot—indistinguishable from it, in fact, from anything more than a few yards away—was a four-acre plot that was losing about six tons of soil per acre each year, much closer to the rate that conservationists think can be permitted without long-term damage. This plot was not soggy, and its rivulets were less conspicuous—an indication that much of the water from the last rain had percolated into the soil instead of running off. Weeds, principally dandelions and orchard grass, were much more plentiful among the corn plants here, but they didn't seem to be disturbing the crop too much; although they could compete with the corn for water and nutrients, Ingram said, they could not reach high enough to compete for sunlight. Here and there we encountered a bald spot, a place where field mice had got to the seed, but the plant population, as measured earlier in the season, was not much lower here than in the other plot—about 19,500 plants per acre as opposed to about 21,000, a reduction of approximately 7 percent—and Owen Ingram guessed that the water damage we had seen in the first plot would eliminate even that margin of difference. The larger section, however, had been cultivated in the traditional manner: after the last harvest, the earth had been turned over with a moldboard plow, which had buried the field's weeds and the residue of the previous crop, replacing them with a handsome, flat layer of dark soil from below; then the ground had been disked three times (a less vigorous form of plowing) and planted.

The smaller plot, on the other hand, had been cultivated according to a method called "zero tillage," or "no till," which is to say it hadn't really been cultivated at all: the vegetation on

the ground had been left there to protect the soil from erosion, and the corn had been planted right through it, by a machine that cuts only narrow slits for the deposit of seeds. Owen Ingram had no way of knowing for sure how the yields of the two plots would compare at harvest time, but for the moment all looked good, and he was happy.

Ingram had flown over the field the day before, he said, and had challenged his flying companions, one of them a farmer, to distinguish the zero-tilled section from the conventionally tilled one. "I couldn't even tell them apart," Ingram said, "and I knew where the line was." If the yields of the two plots did turn out to be comparable, even roughly so, Ingram would be haranguing farmers about it all winter. For although zero tillage and other, less extreme forms of "conservation tillage" undercut some of the farmer's most deeply rooted prejudices—for example, the notion that a weedy, unworked field means a sloppy, nonworking farmer—they seem to be the best hope of solving an erosion problem that conservationists see as an impending national disaster. Thus, to put it in the simplest terms possible, the government wants farmers to stop plowing their land.

"Farmers he told me, are an independent lot. I think that's one of the reasons they farm. And the greatest innovation ever to hit farming was hybrid corn. What did it take to make hybrid corn an accepted practice—fifteen years? It cost nothing but a little seed! Didn't change anything else! . . . And it took fifteen years to become an accepted practice. Anything else we do is far more drastic than that, and yet we're gettin' acceptance on this zero till at a pretty darn rapid rate."

—Michael Lenehan

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Kays Gary, Columnist

Foreword by C.A. McKnight



A collection of his writings compiled by his friends