

KID'S KORN ER

Threat of second dust bowl haunts farmers, scientists

WASHINGTON — Harold Hogue has lived through one Dust Bowl. He isn't anxious to see another. But he's not confident that he won't.

In 1935, the blinding storms that uprooted the Great Plains destroyed his wheat crop at Dalhart, Texas.

Hogue stuck it out. With hard work, he survived the Depression, and today he farms 20 verdant square miles of Texas grain. He drives a Coupe de Ville, winters in Palm Springs. His land is irrigated with water pumped from wells; natural gas powers the pumps. Still, he is apprehensive.

"A lot of people say we'll never have another Dust Bowl," he says. But we can. "With the price of natural gas, we could go back to dryland farming soon. A lot of farmers already are," he says.

\$1 Billion Loss

Eroding cropland may cost the United States \$1 billion a year in polluted and sedimented rivers and lakes. But soils are complicated, and the extent and causes of erosion vary.

In 1977, the U.S. Soil Conservation Service estimates, some three billion tons of soil were "lost" from cultivated fields, two-thirds from water and one-third from wind. One-fifth of the eroded cropland came from Texas.

The entry of American farmers into the export business, spurred by grain sales to the Soviet Union in 1972, sent prices soaring and led to a fivefold increase in the value of U.S. farm exports by the end of the decade.

It also aggravated the erosion problem, as farmers plowed up an additional 60 million acres, much of it previously protected by grass.

Views on soil erosion depend on where one lives, Boyd Gibbons writes. There are, he explains, upwards of 30,000 different soils in

this country.

"Without soils there would be no grass, no cows, no bread, no us," he writes. "When we think that man runs the show on earth, we might recall that earth is mostly rock and life only a veneer on it, sustained largely by a sheet of soils derived from and covering the rock."

"Nature beats up the landscape," says Dick Arnold, director of the SCS soil survey division. "But man accelerates it. Soils are important to survival. Let's not beat them up if we don't have to."

Varied Origins

Some soils are born from rotted bedrock, as in the Piedmont area of the eastern United States. Others evolve from rock moved in from elsewhere by wind, water, or glaciers.

"In many ways, soils are still a mystery," says Arnold. "We know some basic physics and chemistry, but we still have a lot to learn about how soils form."

Landscapes alternate between cycles of erosion and stability. Clay and organic particles can travel hundreds of miles in a big storm.

"Most people have no idea how fast landscapes can change," says Ray Daniels, former SCS director of soil survey investigations. "In some cases man-made erosion may be faster, in others slower, than geologic erosion."

Crop yields have been increasing for years, despite erosion, and scientists think technology, particularly the tenfold increase in the use of commercial fertilizer since World War II, has masked erosion damage.

Gibbons notes that "soil conservation is still dictated more by economics than by good intentions." Farmers are deep-plowing less to save money—on



Desert-like appearance of a farm in the Texas Panhandle, a productive cotton-growing region, shows the ravages of a windstorm that lifted the silt and left the sand. Texas accounts for 17 percent of the nation's land erosion, and many Texans fear a return of the 1930's Dust Bowl. Some think it's already started. In 1977, the Soil Conservation Service estimated, three billion tons of plowed soil were lost to wind and water.

fuel, for example—and increased mulch on their fields has reduced runoff and erosion.

In 1983, the federal government spent \$1 billion on erosion control and \$28 billion on subsidies to farmers, the subsidies up dramatically from \$7 billion two years earlier.

The Reagan Administration and Congress are targeting erosion-control efforts on areas deemed to need them most. "The trick is to crack the big-equipment syndrome and get the farmer off that big breaking plow," says Peter Myers, head of the SCS.

"We've always gone at erosion

as a moral issue, but now we also want to appeal to the farmer in dollars and cents. We have to be careful not to paint a distorted picture. Soil erosion is not a today problem; it's a tomorrow problem, but you have to work on it today."

Great Potential Erosion

Bill Fryrear, head of the U.S. Agriculture Department's Agricultural Research Service station at Big Spring, Texas, thinks the potential for erosion is greater now than it was in the 1930's," he told Gibbons, "we're in for some

real trouble. You're in country now that man in his infinite wisdom did not improve upon."

Another big plow-up of the Middle West's erodible soils is inevitable if exports and prices soar again, Gibbons concludes. He writes:

"Those men on the plows churning up High Plains range are hoping for rain and a few bumper wheat crops to pay off a gamble in country where grass returns slowly and drought holds the cards."

COLOR THIS!

1. BLACK	6. ORANGE
2. RED	7. GREEN
3. YELLOW	8. LT. BROWN
4. BLUE	9. LT. BLUE
5. PINK	10. LT. GREEN

FOUR-O'CLOCK — THIS BEAUTIFUL PERENNIAL PLANT GROWS WILD IN TROPICAL AMERICA. THIS PLANT PREFERS NIGHT TO DAY. IT REFUSES TO WAKE UP AND BLOSSOM UNTIL LATE IN THE AFTERNOON, THIS IS WHY IT IS CALLED FOUR-O-CLOCK. IT GROWS FROM 2 TO 4 FEET HIGH. ITS FRAGRANT FLOWERS COME IN ALL COLORS.

