

WEATHER:Monday, windy and cold with a 70 percent chance of snow. 1 to 2 inches accumulations possible. High in the lower to mid-30s. Northwest wind 15 to 30 mph. Monday night, occasional flurries in the evening followed by decreasing cloudiness toward morning. Low in the lower to mid-20s.

NU's trip to Irvine ruined by 109-101 loss

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New survey shows Nebraskans smoke less than average

By Kip Fry
Staff Reporter

The percentage of Nebraskans who smoke is less than the percentage of Americans who smoke, according to a five-year study by the Nebraska Prevention Center for Alcohol and Drug Abuse.

Twenty-five percent of Nebraskans smoke, compared to 30 percent nationwide, the study said. From 1980 to 1985, the percent of smokers among the state's adult male population declined from 30 percent to 25 percent. Female smokers declined in the state from 26 percent to 24 percent during the same period of time.

"You have to ask, will the decline continue?" asked Ian Newman, director of the center and professor of health education at UNL. "It may have gone as far as it will go. It depends on whether people are quitting or just not picking (the habit) up."

Rural areas appear to be the most smoke-free, according to the study. The number of male smokers in rural areas decreased from 26 percent to 13 percent between 1980 and 1985. The number of female smokers declined during the same period from 15 percent to 10 percent.

Despite this news, the study said many of the people who quit smoking were light smokers, or people who smoke less than 15 cigarettes a day.



Andrea Hoy/Daily Nebraskan

Winter wonderland

Deb Boren, right, and her daughter, Amy, look at Christmas decorations while riding the escalator in the Atrium, Sunday. Both said they were getting an early start on their Christmas shopping.

Farmers fight an upstream battle

By Shiv Cariappa
Staff Reporter

Erosion of state's topsoil concerns experts

It has been an especially wet year, and Bill Armbrust is pleased. The rains will provide him with a "fabulous crop."

But rains also worry Armbrust. Excess rains and wind cause erosion in the soft loess hills of eastern Nebraska. And Armbrust wonders sometimes how much precious topsoil will be left for his grandchildren if similar weather patterns continue for the next 20 years and beyond.

His worries are not unfounded. Conservation experts say this year's heavy rains could wash away up to 60 tons of soil an acre, 12 times the acceptable loss.

"We may have lost as much soil in one year as should have been lost in 12 years," says Alice Jones, associate professor of agronomy at UNL.

Over the long run, such heavy erosion means farms such as Armbrust's would eventually become non-tillable and unproductive wasteland. Already, conservationists say, crop production is down five to 10 bushels per acre in many farms in southeastern Nebraska.

Adding to the loss of topsoils are off-site erosion costs, such as contamination of ground and surface water from fertilizers and pesticides that are present in eroding soil.

"If you look at it in terms of soil and chemical movement we are already paying indirectly through taxes," she says. When soil erodes "the lost soil may end in a ditch and it needs to be cleaned out, and this comes from tax dollars," Jones says.

Productivity is lost, Jones says, because crops depend on the nutrients found in the upper most

eight to 16 inches of topsoil. "Soil is really a living entity," Jones says. Fertilizers introduced into the soil, she says, cannot replace all of the qualities. For example, organic matter increases the soil's ability to hold water. With adequate conservation, she says, "erosion would be no faster than the replenishing of soil through natural factors."

Conservation hindered
But a variety of factors hindered adequate conservation. In the 1970s — because of prevailing economic conditions — marginal land and range land were extensively cultivated. Conservation practices such as terracing, damming, conservation tillage and crop rotation "wasn't the style," says Terry Gillespie, a soil conservationist for the United States Department of Agriculture.

Much of the land broken up for cultivation in that period also "broke up fragile soils, that is, more erodible soil," and this was left "untreated," Gillespie says.

He blames "tax incentives for making it advantageous for corporations to get in." Conservationists say corporations are poor stewards of land.

But economic factors have discouraged conservation among many non-corporate farmers, too. Armbrust, who farms about 850 acres of land, says he fights a "constant battle" to keep his land manageable. With the current economic situation, Armbrust says, conservation is "lower down the priority list" for him.

"I should be plowing terraces now," he says, "but the money and the time is not there to keep the

terraces and revamp waterways." He acknowledges that conservation is extremely important and critical for "long-term livelihood."

Because of topsoil loss, Armbrust is forced to place "more nitrogen into the soil."

Time and money
The telling factor is time and money, and Armbrust typifies many farmers. His dilemma of ignoring conservation is "understandable," says Maurice Baker, professor of agriculture economics at UNL.

Baker says that "from an economic standpoint, there is really no incentive for that individual farmer to do anything about the soil erosion problem, because it costs them money. It takes time, materials and energy to put in terraces."

Farmers who operate on thin soil are particularly vulnerable to economic pressure, Baker says.

The loss of an inch or two of top soil may significantly affect either the yields or the amount of fertilizers and other chemicals they have to put into the soil to maintain productivity, Baker says.

Erosion on farmland is costly to the farmer, but society picks up the off-site costs of erosion.

"It's a very complex problem we are looking at," Baker says. When soil washes off the land, he says, much of it gets into streams. In this part of the country, it gets into the Missouri River, which dumps into the Mississippi River. Millions of dollars are spent each year dredging silt out of the lower Mississippi to accommodate barge traffic, Baker says.

Cost-sharing
Considering the complexities of the problem and its costs to society,

Baker says, "it is desirable for us to encourage conservation either through cost-sharing or outright payment to the farmer."

In eastern Nebraska much of the topsoil is already lost, Jones says. So far technology and research have compensated production loss stemming from erosion.

She says plant-breeding programs, new and improved fertilizers and insecticides, better harvesting techniques and a variety of new herbicides all have contributed toward better production.

"What we see today in terms of production is largely the result of good technology, so we see yield increasing. But we are probably at a plateau with technology. We are getting small changes now. We are beginning to notice some of the soil affects on crop production," Jones says. "But many, many farmers flat out say that conservation is not important. The soil is here. Although valuable soil is being lost every year, Jones says, many farmers don't seem to realize it."

Polluted water
Erosion is not something that is apparent to the casual observer. Jones likens it to polluted water.

"You don't see erosion; you don't see polluted water. But over the years, we came to believe water pollution was important. We saw the effects of nitrates."

Nebraska nitrate contamination is now so serious that extensive tax-supported monitoring systems have been installed to gauge water quality.

If erosion is not controlled, Jones says, Americans may face "a four-fold increase in the cost of food, because our fields can no longer

produce, or cost so much more to produce."

Young farmers

Jones says younger farmers tend to be more receptive to conservation.

Armbrust acknowledges that older farmers in his area tend to be reluctant practitioners of conservation. But he sees hopeful signs, such as the present practice of "minimum tillage" and what he calls "evolving cultural practices" that will benefit conservation.

Although some conservation practices such as terracing are expensive others are not. Conservationists say strip-cropping, crop rotation and contour farming or a combination of these should pose little expense.

Residue management, the practice of leaving after-harvest crop residue on the ground surface as opposed to tilling it under, is "no cost at all," Jones says.

Public awareness

During the "Dust Bowl" period of the 1930s, erosion captured the public's attention. Public awareness today may not be acute, say conservationists, but erosion costs are well documented and cannot be ignored.

Warns Max Schnepf, editor of publications for the Soil Conservation Service of America: "At some point, even if it is not in the farmer's lifetime, the land will lose all its productivity."

"If we continue mining our soil," Armbrust says, "we are headed backwards."

The story was written in conjunction with the UNL College of Journalism's depth reporting class taught by Al Pagel, Gannett professional lecturer.