

Illinois Climate Change Advisory Group

Subgroup: Commercial, Industrial and Agriculture

Policy Name: #21 Expand use of no-till farming

Policy Type: Financial

Estimated 2020 Reductions: 0.5 MMtons

Description

Tilling soil releases carbon to the air that forms CO₂. Continuous no-till (CNT) farming sequesters carbon in the soil and therefore reduces atmospheric CO₂ levels. Many Illinois farmers will not till the soil for one or two years as they rotate between corn and soy beans, but CNT is necessary to keep carbon sequestered.

This straw man proposal would provide financial incentives for farmers to use no-till farming. Data on the number of CNT acres in Illinois is highly uncertain. The Illinois Department of Agriculture estimates that about 10 to 13 percent of the roughly 23 million acres of croplands in Illinois are under CNT, or about 2.3 to 2.6 million acres.

Some farmer believe the disbenefits of CNT (e.g., seeds can take longer to sprout because the soil is cooler, potentially lower yields) outweigh the benefits (e.g, higher carbon content soils, less erosion, fuel savings). New equipment may also be needed for CNT.

The U.S. Natural Resources Conservation Service offers a flat rate of \$15 per acre per year up to 3 years of payments for new no-till farming, limited to 400 acres. The Chicago Climate Exchange offers farmers about \$1.50/acre at current prices (0.5 tons CO₂ sequestered/acre @ \$4/ton minus administrative fees), with no acreage limits.

Additional incentives are needed to increase the number of CNT acres. It may be possible to use the Energy 2020 model to estimate the effects of a particular financial incentive and to determine how much is needed to convert crop land to CNT. This straw proposal assumes an incentive sufficient to convert 1 million acres to CNT.

Rough estimate of reductions from BAU in 2020

Assume 0.5 metric tons sequestered for continuous no-till (CNT) farming.

Assume an additional 1 million acres uses CNT by 2020.

1 million X 0.5 tons CO₂ sequestered/acre = 0.5 MMtons

Timetables, duration and stringency

Begin additional incentives in 2009.

Barriers to implementation

- Illinois farmers prefer to till, at least every few years.
- Funding for additional incentives.
- CNT can be more cost-effective even if yields are slightly lower. However, high corn prices undermine this.