

EC2275 (August 2025)

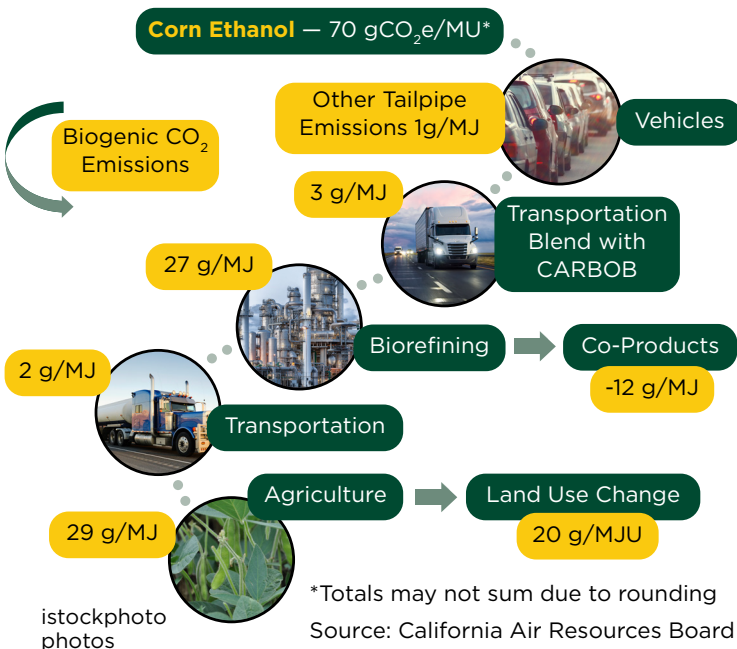


# What's a Carbon Intensity Score?

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A carbon intensity (CI) score is a numerical estimate of the total greenhouse gas emissions associated with producing a product, often expressed in grams of carbon dioxide equivalent per megajoule (gCO<sub>2</sub>e/MJ) for fuels or per unit (e.g., gCO<sub>2</sub>e/bushel) for food commodities.

## Carbon Intensity Score of Corn Ethanol



## Who Uses CI Scores?

CI scores are used by a variety of governmental programs and private firms looking to accurately track carbon emissions:

- Fuel programs: California LCFS, Oregon CFP, U.S. 45Z
- Food companies: Nestlé, PepsiCo, Unilever
- Carbon credit platforms: Indigo Ag, Agoro, Truterra

## How are CI scores calculated?

Typically estimated using lifecycle assessment (LCA) models:

- GREET model (used by California LCFS, DOE, and USDA)
- GHGenius (common in Canada)
- Cool Farm Tool (used by Unilever, PepsiCo and other multinationals)
- COMET-Planner (developed by USDA NRCS)

These tools combine farm-specific activity data — such as fertilizer rates, fuel use and tillage practices — with standardized emissions factors to estimate greenhouse gas emissions. Modeling assumptions, including regional energy mixes, land-use impacts and co-product treatment, are used to fill in gaps and ensure consistency across systems. The result is a CI score that expresses total emissions per unit of output, such as per bushel or per megajoule, enabling comparison across farms, practices and supply chains.

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