

## Carbon Intensity

Much of the agricultural news this week has highlighted the recently released proposed regulation changes to the federal tax code section 45z. If you have not been following, or have little interest in federal tax law, I cannot say I blame you. However, these proposed changes speak to broader undercurrents of “the zeitgeist” and will likely have profound effects in agricultural as well as energy markets.

The Inflation Reduction Act passed in August 2022 with broad provisions and clear actions to establish clean energy development that mitigate the effects of climate change. The new law created at least two interesting additions to Title 26 of the Internal Revenue Service Code, subsection 40B and 45Z. The provisions listed in 40B were somewhat provisional; established in 2023 and ended in 2024 with the hope that guidance on the more permanent 45Z code would be established.

Without delving too deeply into the dry and technical language of the code, the most basic summary of the changes is that fuel producing businesses may claim a tax credit for generating low-carbon, biofuels. On January 10th, the Internal Revenue Service and the Department of Treasury released provisional guidance on the 45Z tax credits, broadly defining eligible fuels as those that are “suitable for use” as a transportation fuel.

One of the most important fuel candidates is “Sustainable Aviation Fuel” or SAF – a blend of petroleum and ethanol. The latter ingredient may be most commonly derived from No.2 yellow corn, the field corn grown across this nation.

This additional use case for field corn marks a potentially significant increase in demand for the grain and therefore its price assuming similar levels of production. As such, many industry organizations representing farmers have been wildly supportive of the tax credits and claim farmers would be a beneficiary. No less, seeking to decarbon – or at least attempting to reduce carbon emissions – aviation travel marks a noble and laudable goal to mitigate the effects of global climate change given the magnitude of the sector’s emissions.

However, as with everything, the other side of the story looms. The January 10th release fell well short of industry expectations with some describing it a feeble attempt to deliver policy commitments and others critiquing how this measure only passes the buck to the next administration.

Back on the farm, questions surrounding the production practices required for the fuel feedstock (corn/soybeans/sorghum) to be considered “low-carbon” remain unanswered. General guidance on the use of cover crops, no-till, and nutrient management practices are provided, yet specific actions or reporting requirements are open.

Finally, the state of the models used to determine the “carbon intensity” of the feedstock is again fluid. The Department of Energy is still yet to release the finalized version of its Greenhouse gasses, Related Emissions, and Energy use in Technologies (aka “GREET”), model that will establish the parameters of lifecycle carbon emissions.

Farmers in Maryland are not directly affected by these proposed changes as the majority of the corn produced in the region enters the animal feed supply chain. The knock-on effect of this is significant, not only potentially redirecting excess corn towards mid-western ethanol production, but also what it says about conservation agriculture.

For years, Maryland farmers have been leading adopters of now termed, “climate smart agriculture” practices like no-till, cover crops and nutrient management. Personally, this Ag Agent finds it fascinating that these market-based incentives are only now being created and seemingly narrowly benefit mid-western growers new to these practices. Tally me as another 45z critic, as I long for the day that Mid-Atlantic farmers are duly rewarded for their longstanding commitment to sustainable agriculture.

The University of Maryland Extension Central Maryland Agriculture and Food Systems team will hold its annual Agronomy Update on February 19th, 2025 at the Urbana Fire Hall (3602 Urbana Pike, Frederick, MD 21704) from 9 am - 3:00 pm. Speakers will cover topics ranging from novel agronomic research findings to the state of agricultural markets. Continuing education credits are available for attendees. Please consider attending this event to stay up to date on the latest agronomic trends. To register go to [2025CMAU.eventbrite.com](https://2025CMAU.eventbrite.com)

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