Life Cycle Assessment of Bioethanol produced from Lignocellulosic Biomass
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What this research is about
- Despite the environmental benefits of conventionally produced lignocellulosic bioethanol, its economic viability is noted to be doubtful.
- We aim to evaluate bioethanol production processes to determine if environmentally preferable and economically viable bioethanol can be produced from lignocellulosic biomass (with/without torrefaction).

What the researchers did
- Life cycle assessment (LCA) methodologies are used to evaluate the life cycle of bioethanol. Innovative technologies are adopted for further study.

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What the researchers found
- Bioethanol produced from wheat straw by enzymatic hydrolysis confirmed that despite the environmental benefits, economic viability is doubtful (Fig. 4).
- Further studies would enable to determine if environmentally preferable and economically viable bioethanol can be produced from biomass.

What you need to know
- In depth studies are demanded for each stages of the life cycle of bioethanol.
- LCA methodologies can be useful to improve production processes and in decision making for any future investment.

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