

Cellulosic Ethanol Unit Objectives: By the end of this unit, students will be able to...

- Summarize problems associated with the production and use of ethanol.
- Identify and explain problems specific to corn ethanol that could be addressed by using cellulosic ethanol instead.
- Summarize the main benefits of cellulosic ethanol in comparison to other fuel sources.
- Identify and outline problems specific to cellulosic ethanol that are currently preventing a more widespread use of this fuel.
- Identify cellulose, hemicellulose, and lignin molecules based on images and descriptions.
- Explain how the molecular structure of cellulose differs from starch and how they are similar.
- Define pretreatment and hydrolysis.
- Identify steps of cellulosic ethanol production using pictures and descriptions.
- Draft a position statement in which students take a stance either for or against the proposal to expand the use of cellulosic ethanol in the future and back this position with evidence and facts in regards to this source of fuel (essay format on quiz).