

Published on *The National Law Review* <https://natlawreview.com>

---

## DOE Studies Impact Of Drought On Biomass Products

Article By:

B&C® Biobased and Sustainable Chemicals Practice Group Bergeson & Campbell, P.C.

---

[Researchers from the U.S. Department of Energy \(DOE\) have linked changes in rainfall and other environmental stressors during crop growth to potential deleterious effects on biofuel production.](#) The study demonstrates that the effect of weather conditions on crop yields can significantly impact the downstream processing of those crops for biofuel production. Researchers compared the production of biofuel from switchgrass harvested after a major drought to switchgrass harvested after normal precipitation. The switchgrass crop that experienced major drought conditions contained significantly higher levels of soluble sugar. During the pre-treatment process, however, the sugar was chemically altered to form imidazoles and pyrazines, which inhibited fermentation of the sugar into biofuel. The researchers proposed potential solutions to overcoming the issue, such as removing the soluble sugars before pretreatment or using microbial strains resistant to the toxic effects of imidazoles and pyrazines for fermentation. Overall the research highlights the need to develop sustainable biofuel production systems capable of mitigating the deleterious effect of stress, such as fluctuations in precipitation.

©2025 Bergeson & Campbell, P.C.

---

National Law Review, Volume VII, Number 265

Source URL: <https://natlawreview.com/article/doe-studies-impact-drought-biomass-products>