

Risk assessment models prove unreliable at predicting which biofuel crops are likely to become invasive

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Several of the plants grown as biofuel crops have proved to be invaders in some environments – spreading rapidly and overwhelming surrounding natural ecosystems. Concerns about these weedy tendencies have led many to contend that risk assessments should be conducted before any bioenergy crop becomes widely cultivated. A new study featured in the journal *Invasive Plant Science and Management*, though, shows that current "gold-standard" weed risk assessment techniques simply aren't up to the task.

Scientists at Virginia Tech used two of the best-respected and most widely used weed [risk assessment](#) models to develop invasive species risk scores for three categories of plants. They assessed 16 [bioenergy crops](#), 14 agronomic crops and 10 known invasive weeds introduced for agronomic purposes.

Both models failed to reliably distinguish weeds from crops. For example, cereal rye received a higher risk score than kudzu, which is a widespread and damaging invader across the Southeast.

"We found the majority of all the species we evaluated had high weed risk assessment scores, including crops that we predicted would score low," said Jacob Barney Ph.D., assistant professor of Invasive Plant Ecology at Virginia Tech. "It is clear we should be cautious about using current risk assessment models in setting biofuels policy."

In the absence of effective risk models, the Virginia Tech research team stressed the importance of field evaluations to determine whether [crops](#) are escaping field borders.

More information: "Predicting Biofuel Invasiveness: A Relative Comparison to Crops and Weeds." *Invasive Plant Science and Management*: July-September 2015, Vol. 8, No. 3, pp. 323-333. doi: [dx.doi.org/10.1614/IPSM-D-15-00001.1](https://doi.org/10.1614/IPSM-D-15-00001.1)

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