

LETTER TO THE EDITOR

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Reply: Specific Reasons to Favor Maize in the U.S.

Bush and Leach are champions for rice, which is, of course, a key crop in many countries. The rice research and consumer communities are located mainly outside the U.S. Thus, in the international arena, there are many compelling reasons for exploring both the suitability of rice by-products as feedstocks for biofuel production and in using rice to answer fundamental questions in plant biology.

Those interested in participating in the exciting arena of fuel stock improvement should consider their goals and the resources available and then choose appropriate organisms and methods to answer key questions. Our Commentary was directed specifically to U.S. research community members considering how to contribute to

improvement of C4 grasses as biofuels. In particular, we are concerned about how lessons on the lack of genetic diversity in crops slated to cover vast areas in the U.S. will be managed. For this particular concern, the lessons learned from the maize leaf blight in 1969 to 1970 are an essential part of the discussion. The trade-offs between growing maize for food or ethanol production and for swapping land currently growing maize for other biofuel crops raise other important social, ecological, and economic questions for the U.S. research community. In terms of attributes of maize for those not familiar with grasses, we suggested that for U.S.-based researchers moving into biofuel studies, the logical choice of a model species is maize primarily because it is closely related to the current top candidates for biofuel production. We also note that for U.S. researchers

maize is easier to grow and to import into the U.S. than rice and that maize is very much easier to cross and generate large progenies and hence to conduct basic genetic research with than other grasses discussed as model organisms for biofuel research.

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