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Commentary: We lack evidence to call *Jatropha* invasive

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Biofuel crops are being increasingly promoted as an economic way to satisfy energy needs, while concurrently reducing greenhouse gas emissions. However, some studies have highlighted the risk of invasiveness of the involved crop species and consequent environmental damage. *Jatropha curcas* L. has some potential to improve rural livelihoods in tropical developing countries, if such risks could be minimized. Yet *J. curcas* has been listed as “potential invader” or even “highly invasive” in several publications.^{1,2} For this reason, some countries such as South Africa and Australia took legal measures not to further domesticate *Jatropha*. However, subsequent critical analysis of the literature, considering *Jatropha*’s functional traits and the circumstantial factors which might contribute to invasive behavior³, plus a series of *in situ* field observations and experiments in Zambia and Burkina Faso^{4,5}, failed to find convincing, empirical evidence that *J. curcas* is invasive. Yet, more recent papers^{6,7} seem to have missed these latest advances and continue to consider the species as highly invasive relying on mere applications of Weed Risk Assessment (WRA) tools (e.g.,⁸⁻¹⁰). Problematic is that none of these sources used field data. Scientists within the invasive species community are beginning to question the undifferentiated use of WRA tools, partly because of the low data quality they rely upon and also because of the lack of context they are able to integrate into the decision making process. Negussie et al. (2013a)³ proposed feasible practical recommendations for the selection, introduction, cultivation and processing steps of *Jatropha* and other biofuel crops to minimize invasiveness risk. Yokomizo et al. (2012)¹¹ outlined the use of cost benefit analysis addressing uncertainty, in deciding whether, or not, to introduce a particular species so decisions would depend upon the anticipated economic benefit of that plant in combination with the likely cost of controlling a potential outbreak. In the current climate, with an urgent need for sustainable intensification of food and energy production at the forefront, this seems a more sensible approach.

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