

Gaps in border controls are related to alien insect invasions in Europe

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European countries with gaps in border security surrounding agricultural imports have been invaded by the largest number of exotic insect pests, according to research published Oct 24 in the open access journal *PLOS ONE* by Steven Bacon and colleagues from the Swiss Federal Research Station Agroscope ART and the University of Fribourg, Switzerland.

Invasive [agricultural pests](#) pose growing environmental and economic problems, threatening biodiversity and costing billions of dollars in economic losses annually. Large volumes of cross-border trade increase the risks of invasion, but the lack of metrics to estimate this risk makes control a challenge.

In the new study, the authors combine global data sets of international agricultural trade with the biology and distribution of invasive [insect species](#) to create metrics that can be used to evaluate and improve border controls.

According to the study, known [insect pests](#) on many agricultural imports may be frequently undetected by European plant protection authorities. The authors suggest that this leaves European imports vulnerable to pests from countries like the USA, Argentina and Brazil, particularly to insects on large scale commodities such as soybeans, coffee and fruits like bananas, grapes and pineapples, which are the least controlled imports.

According to the authors, these metrics could help quantify the link between invasive insects and international trade. "Developing these

metrics enables us to evaluate existing border controls in Europe for the first time. Highlighting gaps in border controls, which relate to insect invasions, gives plant protection authorities the tools to improve biosecurity", says Bacon.

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