

The PPQ Weed Risk Assessment

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Plant Protection and Quarantine's weed risk assessment (WRA) process was created to evaluate the risk potential associated with plants that may be weedy or invasive. The tool was designed as a pre-border application for predicting invasiveness, however, it is also appropriate to use on species beginning to escape or naturalize. The WRA consists mostly of a series of yes/no questions organized into four risk elements: establishment/spread, impact, geographic, and entry potential. Score values from the first two risk elements are used in a logistic-regression model to evaluate the risk potential of the species. This model was developed and validated with 204 species with known invasive status from the United States. Analysis of a species' U.S. geographic potential is done separately so that resource managers can make decisions appropriate for their jurisdiction. Our WRA process provides three sets of results that help characterize a species' risk profile. The first is the species' risk scores, probabilities of invasiveness, and model conclusion. The second is the results from the uncertainty analysis that evaluates the sensitivity of the risk scores to uncertainty. Finally, we also report where in the United States the species is likely to establish. Since we developed the PPQ WRA model, we have evaluated 77 species. Some of the ones that present a high risk potential to the Great Lakes region are highlighted in the presentation.