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## PORT INTERCEPTION, QUARANTINE AND TREATMENT DEVELOPMENT FOR EXOTIC INSECTS IN THE UNITED STATES

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### ABSTRACT

The USDA APHIS is tasked with developing regulatory policy and science-based solutions to prevent introductions and establish quarantines and eradication programs when introductions do occur. Despite the implementation of phytosanitary measures to prevent the introduction of invasive species into the US, interceptions at ports of entry remain common for a number of insect taxa. Frequency of interception can trigger restrictions on trade and revisions to phytosanitary treatment schedules. Recent introductions of several tortricid pests of fruit and ornamental plants, a spike in introductions of Khapra beetle, and the establishment of a number of devastating wood boring insects have generated special interest in reducing the threat of invasive insects to our agricultural commodities and natural resources.

Here we report on the status of projects developed to evaluate insect interceptions at US ports by improving our existing capacity to identify immature insects and evaluating efficacy of phytosanitary treatments on imported commodities. In collaboration with a number of US ports we are collecting live exotic insects as they are intercepted, rearing immature stages to adult to facilitate identification, and using DNA sequencing to identify species already represented in genetic databases or to catalog unknowns and expand our current database. As a part of this process we are looking for patterns in interceptions to document pathways of introduction, identify commonly intercepted insects, and determine whether they result from phytosanitary treatment failures or a lack of treatment altogether. Results are improving our identification capacity and will help shape future efforts in treatment development.