

Recent Issues and New Challenges Regarding the Permitting of New Weed Biological Control Agents

L. Smith

USDA-ARS, 800 Buchanan Street, Albany, California 94710, USA link.smith@ars.usda.gov

Abstract

In order to be approved by governmental regulatory agencies in USA, prospective biological control agents must be found to have no significant impact on non-target organisms or the environment. Host specificity experiments are used to assess the risk that an agent poses to non-target plants. However, the results of such experiments can vary widely depending on the experimental conditions, which range from highly artificial no-choice laboratory oviposition or development trials to natural field experiments. The USDA-APHIS Technical Advisory Group (TAG) Reviewer's Manual provides some guidance on how to interpret such data. A recent example of a petition for *Ceratapion basicorne* (Illiger), a weevil that develops inside the root crown of yellow starthistle (*Centaurea solstitialis* L.), shows how such data can vary. TAG interpreted the results to indicate that the insect would be safe to release. However, the observation that some individuals can complete development under no-choice conditions on a crop plant, safflower, caused APHIS to deny a permit despite absence of attack during field experiments. This raises the question of how reliable are the results of field experiments, and what data are necessary to show "no significant impact".