

ENDANGERED SPECIES RISK ASSESSMENT AND PESTICIDE REGULATION: THE SPECIES ASSESSMENT PROCESS

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ABSTRACT

Three important events have resulted in a new process for pesticide endangered species assessment. (1) In late 2004, the EPA Office of Pesticide Programs (OPP) and the Services (USD) Fish and Wildlife Service and NOAA-Fisheries jointly established new Counterpart Regulations to give structure and guidance to the Endangered Species Act (ESA) Section 7 consultation process as it is used in pesticide registration. Pesticide registration is governed separately by the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). (2) In 2005, the FIFRA Endangered Species Task Force (FESTF) submitted data to EPA OPP to support endangered species data requirements for pesticide registration. (3) EPA OPP formally announced its Endangered Species Pesticide Program (ESPP) in November 2005. FIFRA data requirements and these three initiatives (Counterpart Regulations, FESTF data and EPA's ESPP) have resulted in a new and much more complex process for the assessment of threatened and endangered species. Endangered species risk assessment is an important part of the ecological evaluation process that takes place before a pesticide is registered or re-registered. While the registration process is governed by FIFRA and carried out by EPA OPP, the EPA must also comply with the Endangered Species Act, by assuring that any registrations that are allowed will not present a threat to species listed by the ESA as threatened or endangered. If there is a possibility that a given pesticide use may affect a listed species, then EPA must either mitigate that potential effect by modifying the allowable use of the pesticide or completely restricting its use in a given area where a potentially affected species might occur. Since there are many pesticide products, used across the United States in many different ways, evaluating the potential exposure of listed species requires an organized approach to problem formulation and careful use of automation to store, retrieve and compare pesticide and species data. Each pesticide is unique, therefore each assessment is also unique, but if approached using consistent methodology and sound documentation, the evaluation process can be clear, consistent, repeatable, and as efficient as possible. This poster describes how such methods can be applied in the species assessment process.

Data Made Available by FESTF: Information Management System and Access to NatureServe Data

The goal of the program undertaken by the FESTF is centered on improving the consistency, quality, availability and use of existing information on threatened and endangered species and pesticide use. The foundation of this effort is the development of access to existing information that is critical to understanding the relationship between a species and a pesticide product. Existing information that is necessary for species assessment includes data from pesticide labels, usage information, FWS/NOAA-Fisheries, states and those data provided through EPA's access to the NatureServe network. As a result of FESTF's data development process, all of this information is managed by a decision support tool or "information management system" (IMS). The automation the IMS brings is indispensable because the potential intersect of one pesticide's use site and species locations can amount to thousands of co-occurrences that must be systematically addressed. The IMS serves as a "data warehouse" to record and retrieve outcomes from the thousands of relationships examined in each assessment. Highly detailed data are retained and retrievable, and potentially reusable, for parameters such as:

- ▶ Labeled uses of a crop protection substance and the details associated with specific directions for its use
- ▶ The association of a listed species with a labeled crop in a given county
- ▶ The conclusions reached when the overlap of a use pattern, species characteristics, and specific locations are assessed
- ▶ Best available data on species locations, expert opinions and scientific findings used to support an EPA effects determination

The manner in which FESTF work products are implemented within EPA's pesticide review process will enhance the flexibility, efficiency and effectiveness of the ESA Section 7 consultation process and will support EPA's ability to accommodate the procedure described by EPA's Overview Document and the terms of the Alternative Consultation Agreement that now exists between EPA-OPP and the Services. Additionally, by making these tools available to FESTF members and EPA, FESTF provides a foundation for increased efficiency in submitting data to meet EPA requirements. Both the IMS and access to NatureServe data give more rigor to the registrant's and EPA's ability to utilize existing data and document new assessments. FESTF work products support the EPA process for conducting ecological risk assessments and species-specific refinements for endangered species.

Not only will use of these work products play an important role in assuring that the agencies are able to meet standards of "best scientific and commercial data available" but the potential efficiencies gained are key to facing the challenge of ensuring that effects determinations for endangered species do not delay regulatory decision-making under FIFRA.

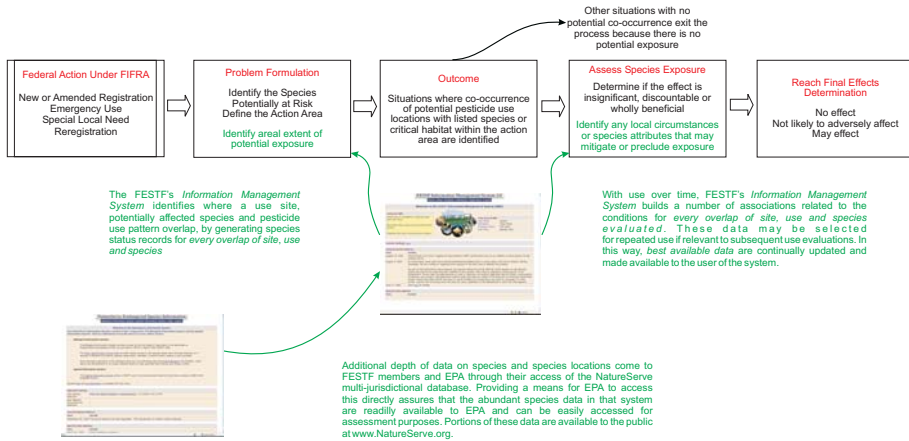
FESTF Data are Critical to EPA OPP's Endangered Species Risk Assessment Process

FESTF tools provide critically important support to endangered species evaluations by:

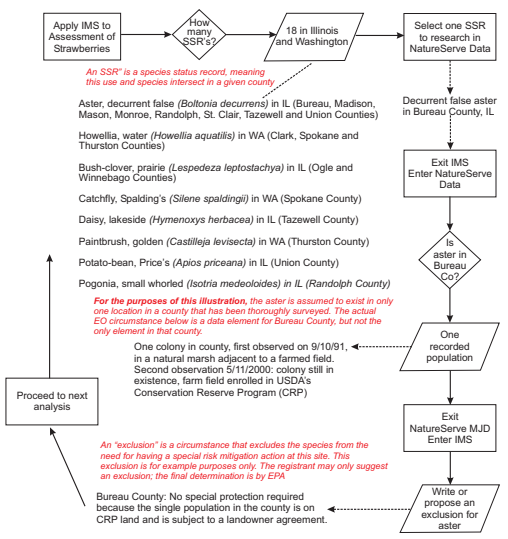
- ▶ Providing better accountability, transparency, organization and communication of the species assessment process
- ▶ Supporting uniform implementation of the ecological risk assessment process, and in particular, the endangered species refined risk assessment process at EPA as described in the EPA Overview Document
- ▶ Serving as a "data warehouse" to record each step of an EPA effects determination
- ▶ Providing a continuous means to collect and utilize the best available data on species biology and location and their relationship to pesticide use sites
- ▶ Bringing a dimension of thoroughness, depth and documentation to the evaluation process that is not possible without the efficiency brought by management of the best available data through information technology
- ▶ Improving the consistency, quality, availability and use of existing information on threatened and endangered species and pesticide use

FESTF Data Access: Bringing Efficiencies to the Endangered Species Data Review Process

For the past decade, FESTF has supported the emerging process of endangered species review for pesticides by developing tools to meet registration data requirements under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). These tools can be utilized by data submitters and EPA to assess endangered species using best available data and scientifically sound procedures. The following chart depicts the EPA assessment process and how FESTF work products operate within it. Green text and arrows indicate FESTF work products or work product function.



Flow Chart of Information Transfer from the NatureServe MJD to the FESTF IMS (For illustration purposes only)



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