

"Water Quality Risk Analysis Process for New and Proposed Pesticides"

**Kirk V. Cook, RG
Oregon Department of Agriculture**

The Federal Pesticide Registration Process

The process of registering a pesticide is a scientific, legal, and administrative procedure through which the EPA closely examines:

The ingredients of the pesticide;

The particular site or crop where it is to be used;

The amount, frequency, and timing of its use; and storage and disposal practices.

In evaluating a pesticide registration application, a wide variety of potential human health and environmental effects associated with use of the product are assessed.

The company that wants to produce the pesticide must provide data from studies that comply with testing guidelines.

The Federal Pesticide Registration Process

The EPA develops risk assessments that evaluate the potential for:

Harm to humans, wildlife, fish, and plants, including endangered species and non-target organisms.

Potential to contaminate surface water or ground water from leaching, runoff, and spray drift.

Potential human risks range from short-term toxicity to long-term effects such as cancer and reproductive system disorders.



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In developing the risk assessment EPA considers:

Registrant bench and field studies:

- Toxicity
- Mobility
- Persistence
- Exposure route(s)

Other Data

- Env. Data Collected by states, federal agencies, Env. Organizations
- Research Institutions risk analysis
- Peer Reviewed Studies from Private Organizations

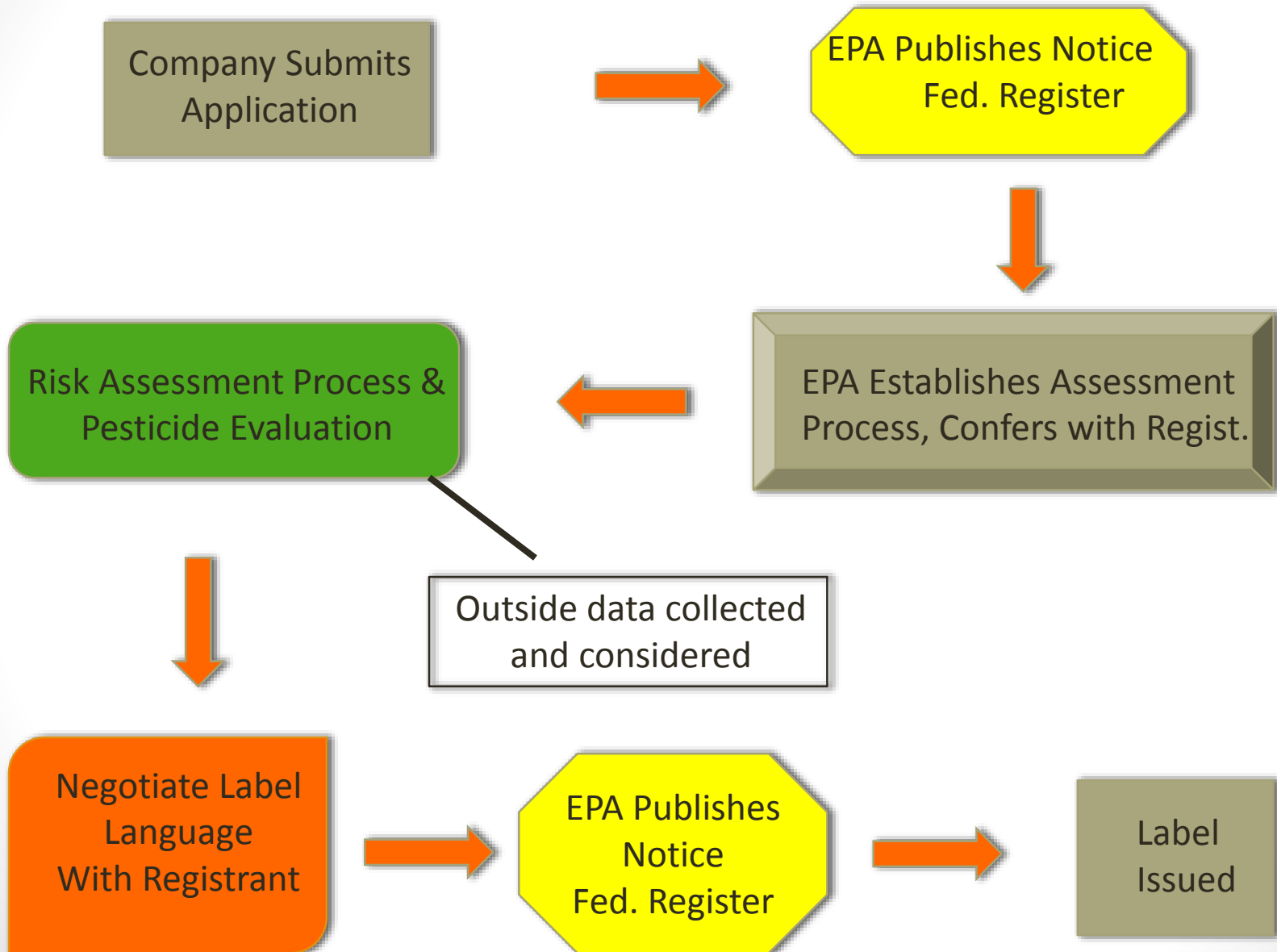
The Federal Pesticide Registration Process

The EPA uses the results of the data analysis and risk assessments to evaluate and approve the language that appears on each pesticide label to ensure the directions for use and safety measures are appropriate to any potential risk.

Following label directions is required by law and is necessary to ensure safe use.



Pesticide Registration Process



During the Evaluation Process

Evaluate environmental risks by reviewing data on:

Potential for ground water contamination

Risks to endangered and threatened species

Potential for endocrine-disruption effects

Evaluate human health risks by reviewing data on:

Aggregate risks—through food, water, and residential uses

Cumulative risks—from different pest. with the same effects

Occupational risks to those applying the product

Implement risk assessment and peer review:

Review all the scientific data on the pesticide product and develop comprehensive risk assessments that examine the potential effects of the product or ingredient on the human population and environment.

Benchmark Development

Aquatic Life Benchmarks are based on toxicity values reviewed by EPA and used in the most recent risk assessments developed as part of the decision-making process for pesticide registration.

The development relies on studies required under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) as well as a wide range of environmental laboratory and field studies available in the public scientific literature to assess environmental risk.

Each Aquatic Life Benchmark is based on the most sensitive, scientifically acceptable toxicity endpoint available to EPA for a given taxon (for example, freshwater fish) of all scientifically acceptable toxicity data available to EPA.

Taxon Used by EPA for Aquatic Life Risk Assessments / Benchmarks



Rainbow trout



Fathead
minnow



Bluegill
sunfish



Green algae



Daphnia magna



Duckweed

These taxon can vary depending upon the goal of the risk assessment for a Specific pesticide, for example in the re-evaluation of the herbicide atrazine Numerous species were used to determine toxicity of the herbicide and Then develop the label language and aquatic life benchmark.

NOTE: Label language is the law, benchmarks are advisory

State Refined Label Language

Language posted on pesticide labels are federally derived

States can modify that language based of state specific needs or concerns. Generally these labels will be more Stringent than federal labels.

Reasons for modification:

State or area specific conditions that require more limitations
For use

Worker protection concerns

Environmental data that indicates greater concern for
pesticide use

Questions?