The Role of Pesticide Usage Data in the Office of Pesticide Programs (OPP)

Overview

Pesticide usage data answer the question, ***"****How is a given pesticide used?"* In EPA's work, pesticide usage data has a key role in risk assessment and risk management. Usage data are also an important component of defining current usage patterns for a particular chemical (or class of chemicals) so that the Agency can estimate changes in these patterns and the potential impacts associated with the regulatory actions.

In some cases, OPP's regulatory actions require *qualitative* information such as what is being treated (crops, animals, equipment, premises), why it is being treated (what pests are being controlled), how the pesticide is applied (application method, application equipment, safety precautions, application limitations), and when the pesticide is used (time of year, the growth period of the crop). In other cases, *quantitative* information is needed, including: percent of the crop area treated with the pesticide, rates of application (e.g., pounds of active ingredient per area of application), number of applications per season or year, and total pounds of active ingredient per year applied on a site.

Usage-related data typically fall into the broad categories of *extent of usage* and *typical usage practices*. *Extent of usage* data describe where (site) pests are being controlled with pesticides. The following are descriptors of extent of usage:

- *Percent of crop treated* (% CT) - the proportion of planted area of a crop in which a pesticide has been used one or more times.
- *Total pounds of active ingredient* (a.i.) - a broad measure of the amount of pesticide active ingredient released into the environment.
- *Formulation* – the constituents of a pesticide product including the percentage of active ingredient and the percentage of inert ingredients.

Data describing *typical usage practices* for agricultural products include:

- *Application rate* - the amount of pesticide used on a crop (or other unit) per treatment.
- *Frequency* - the number of times a pesticide is applied during a specific period of time.
- *Pre-harvest interval* (PHI) - the period of time between the day of the last pesticide application and day of harvest
- *Application method* - the equipment used and how pesticides are handled in the application process
- *Crop harvesting methods* – the method of gathering or collecting crops (e.g., mechanical or hand harvesting)

EPA's Current Pesticide Usage Data Sources

Pesticide usage-related information comes from a wide variety of sources that may include state and federal agencies, registrants, academic literature, and proprietary data developed by market-research firms. Data are typically collected by producer and end-user surveys or censuses.

EPA's current sources of usage-related data for agricultural and non-agricultural pesticide uses include other government entities that produce pesticide-usage data and proprietary data purchased from vendors.

Sources of Publicly Available Pesticide Usage Data from Government Entities

USDA Pesticide Usage Data Sources http://www.nass.usda.gov/About_NASS/index.asp

USDA's National Agricultural Statistics Service (NASS)

NASS conducts farmer surveys to collect pesticide-usage data on major field (e.g., corn, cotton, and soybean), vegetable, and fruit crops in states that account for the bulk of production of these crops. These data are collected based on surveys and updated at various frequencies determined by USDA.

Census of Agriculture

NASS also produces the USDA Census of Agriculture, which consists of uniform, comprehensive data on agricultural production and operator characteristics in each county and state, as well as the U.S. as a whole.

Crop Profiles

USDA produces Crop Profiles that provide information in narrative format about crop production, cultural practices, and pesticide usage. Each Crop Profile describes how a commodity is produced, with emphasis on critical pest management needs - including the role of pesticides in integrated pest management (IPM) and resistance management programs.

California Department of Pesticide Regulation
http://www.cdpr.ca.gov/docs/label/labelque.htm

California Department of Pesticide Regulation collects usage information by conducting a pesticide-usage census in the state. Data collection is annual for all agricultural uses and offers site-specific information.

Sources of Pesticide Usage Data from Proprietary Sources

EPA may enter purchase agreements with firms that produce pesticide usage-related data that facilitates an understanding of how pesticides are used and provides insight into pesticide markets. Data purchased from private firms are under proprietary

agreements. As such, these data are not available to those who have not entered into agreements with the provider.

GfK Kynetec (formerly Dmrkynetec) www.GfK.com

GfK Kynetec i**s** a primary source of proprietary data for agricultural crops. The data are widely used by government entities as well as industry. These data are collected for a large range of row, vegetable, and fruit crops in the continental U.S. and include insecticides, fungicides, herbicides, nematicides, and growth regulators used by producers. Data are collected annually.

SIGMA

SIGMA, a subsidiary of GfK Kynetec, is the primary source for international pesticide usage data for fruits and vegetables. SIGMA provides an annual global study that quantifies the pesticide usage crop-by-crop and by target pest in more than 65 countries.

Kline and Company www.klinegroup.com

Kline usage data provides non-agricultural pesticide data profiles of home/garden and professional usage by class/market segment and chemical. Reports cover professional pesticides and fertilizers in the turf and ornamental markets.