Organisation de Coopération et de Développement Economiques
Organisation for Economic Co-operation and Development

OLIS : 01-Feb-1999
Dist. : 02-Feb-1999

English text only

ENVIRONMENT DIRECTORATE
JOINT MEETING OF THE CHEMICALS COMMITTEE AND THE WORKING PARTY ON CHEMICALS

ENV/JM/MONO(99)1
Unclassified

OECD SERIES ON PESTICIDES
Number 7

OECD Survey on the Collection and Use of Agricultural Pesticide Sales Data: Survey Results

73995

English text only

OECD Environmental Health and Safety Publications

Series on Pesticides No. 7

OECD Survey on the Collection and Use of Agricultural Pesticide Sales Data: Survey Results

Environment Directorate

Organisation for Economic Co-operation and Development

Paris 1999

Also published in the Series on Pesticides:

No. 1, *Data Requirements for Pesticide Registration in OECD Member Countries: Survey Results* (1993)

No. 2, *Final Report on the OECD Pilot Project to Compare Pesticide Data Reviews* (1995)

No. 3, *Data Requirements for Biological Pesticides* (1996)

No. 4, *Activities to Reduce Pesticide Risks in OECD and Selected FAO Countries. Part I: Summary Report* (1996)

No. 5, *Activities to Reduce Pesticide Risks in OECD and Selected FAO Countries. Part II: Survey Responses* (1996)

No. 6, *OECD Governments' Approaches to the Protection of Proprietary Rights and Confidential Business Information in Pesticide Registration*

Published Separately:

OECD Guidance for Country Data Review Reports on Plant Protection Products and their Active Substances - Monograph Guidance

OECD Guidance for Industry Data Submissions on Plant Protection Products and their Active Substances - Dossier Guidance

About the OECD

The Organisation for Economic Co-operation and Development (OECD) is an intergovernmental organisation composed of 29 industrialised countries in North America, Europe and the Pacific. The OECD works to co-ordinate and harmonize government policies, address issues of mutual concern, and respond to international problems.

The Pesticide Programme was created in 1992 within the OECD's Environmental Health and Safety Division to help OECD countries:

- harmonize their pesticide review procedures,
- share the work of evaluating pesticides, and
- reduce risks associated with pesticide use.

The Pesticide Programme is directed by a body called the Pesticide Forum, composed primarily of delegates from OECD Member countries, but also including representatives from the European Commission and other international organisations (e.g. United Nations Food and Agriculture Organization, United Nations Environment Programme, World Health Organization, Council of Europe), and observers from the pesticide industry and public interest organisations (NGO's).

In addition to the **Series on Pesticides**, the Environmental Health and Safety (EHS) Division publishes documents in five other series: **Testing and Assessment**; **Good Laboratory Practice and Compliance Monitoring**; **Risk Management**; **Harmonization of Regulatory Oversight in Biotechnology**; and **Chemical Accidents**. More information about the Environmental Health and Safety Programme and EHS publications is available on the OECD's World Wide Web site (see next page).

This publication was produced within the framework of the Inter-Organization Programme for the Sound Management of Chemicals (IOMC). It was approved for derestriction by the Joint Meeting of the Chemicals Committee and the Working Party on Chemicals, the governing body of the Environmental Health and Safety Division.

The Inter-Organization Programme for the Sound Management of Chemicals (IOMC) was established in 1995 by UNEP, ILO, FAO, WHO, UNIDO and the OECD (the Participating Organizations), following recommendations made by the 1992 UN Conference on Environment and Development to strengthen co-operation and increase international co-ordination in the field of chemical safety. UNITAR joined the IOMC in 1997 to become the seventh Participating Organization. The purpose of the IOMC is to promote co-ordination of the policies and activities pursued by the Participating Organizations, jointly or separately, to achieve the sound management of chemicals in relation to human health and the environment.

CONTENTS

Introduction

This report presents the results of an OECD survey of Member countries' approaches to the collection and use of agricultural pesticide sales data. The survey focused principally on what type of data are collected and how these data are used. This survey was conducted in 1997 as part of the OECD Pesticide Programme.

Summary

The survey indicated that most OECD countries - 20 of the 21 that responded to the survey - collect pesticide sales data nationwide as a mandatory requirement and on an annual or more frequent basis. The data are used for general information purposes, often to help in formulating strategies or policies and, to a lesser extent, to track the use of specific products or the use of pesticides in specific crops.

Almost all of the 20 countries collect the data by volume or by both volume and monetary value, with most countries collecting the data for individual formulated products and/or active ingredients. The majority of countries do not include export data in the collection. Most of those that do include export data, can segregate the export data from the rest of the collection.

Collection of the sales data is carried out by federal organizations in almost all of the 20 countries but the source of the data varies considerably, with about half the countries collecting at least some of the data from individual pesticide manufacturing companies. About half the countries take steps to verify the accuracy and completeness of the data.

Most countries maintain the data on computer. Access to the raw data is usually restricted to domestic government organizations, although in some countries access is also provided to the pesticide industry. Almost all the countries aggregate the data, usually by pesticide type. Some countries also aggregate data by use or chemical family. The majority also carry out some analysis of the data. The results of these analyses are used most frequently to track trends in year to year sales of products or active ingredients and to monitor reductions in pesticide use. Almost all countries make the aggregated data available to all and most produce publicly available publications.

Estimates of the effort required to collect, verify, aggregate and analyze the data vary enormously among the countries.

Background

The survey was carried out within the context of the Pesticide Programme's Risk Reduction Project, which is undertaking a series of activities to develop tools that national governments can use to measure progress in pesticide risk reduction.

One of these activities, a workshop held in Copenhagen in April 1997, recommended that the Pesticide Programme develop pesticide risk indicator models which countries could use to combine information on pesticide risk with information on the quantity and conditions of pesticide use as a way to track risk trends.

The OECD Pesticide Forum, which directs the Pesticide Programme, discussed this recommendation in June 1997 and agreed that it was timely and appropriate for the Programme to undertake work on pesticide risk indicators. However, the Forum also agreed that some preparatory work was necessary in the area of pesticide use, since this is one of the fundamental building blocks for risk indicators - yet many OECD countries do not have good data on actual use (i.e. data reported at the farm level). The Pesticide Forum also acknowledged that the collection of use data could be expensive and agreed that it might be best for national governments to begin by collecting data on pesticide sales, then gradually supplementing this with data on actual use.

The Forum therefore agreed to conduct a survey of OECD Member countries' approaches to the collection and use of pesticide sales data. The purpose would be to find out the extent to which countries collect such data and to create a base of information they could use to improve their programmes. The survey would also complement the OECD Pesticide Programme's other activities on indicators, which include (1) developing models for calculating risk indicators for both the environment and human health, and (2) participating in a project led by Eurostat (the statistical office of the European Commission) to develop guidelines for collecting data on actual pesticide use.

Survey Method

The survey was based on a questionnaire designed by Canada with the assistance of representatives of the United Kingdom, Australia, Denmark, Eurostat and the OECD Secretariat. The survey consisted of 28 questions which first determine whether pesticide sales information is collected and then address in detail:

- what type of data are collected;
- how the raw data are collected and stored;
- whether and how these data are aggregated and analyzed; and finally
- how and to whom information is made available.

Responding Countries

The questionnaire was sent to all OECD member countries in September 1997. Twenty-one member countries completed it. They were: Austria, Australia, Belgium, Canada, Czech Republic, Denmark, Finland, Germany, Greece, Hungary, Ireland, Japan, Korea, Mexico, the Netherlands, Norway, Portugal, Sweden, Switzerland, the United Kingdom and the US The Slovak Republic, which participates in Pesticide Forum meetings as an observer, also completed the questionnaire.

Survey Results

Of the 22 countries that responded to the survey, all but Canada and the Slovak Republic collect data on pesticide sales. Canada plans to start collecting pesticide sales data within the next two years. Among the 20 member countries that collect pesticide sales data, there are strong similarities in most areas of the survey.

Overview

With the exception of Finland, Ireland and Mexico, the collection of pesticide sales data is mandatory in these 20 countries. The data are treated as confidential information in all countries except Hungary, Japan, Korea and Norway.

Pesticide sales data are collected:

- for general information purposes in all countries except Australia and the UK;
- to formulate strategies or policies in 11 countries (Australia, Denmark, Finland, Germany, Hungary, Japan, Korea, the Netherlands, Portugal, Sweden and the US);
- to track the use of specific products in 6 countries (Belgium, Germany, Hungary, Norway, Portugal and Sweden); and
- to track pesticide use on specific crops in 4 countries (Czech Republic, Mexico, Switzerland and the US)

Some countries have special uses for the data.

- Australia uses the data to track the continuing trade in certain hazardous chemicals in connection with the Prior Informed Consent procedure and to assess and collect a levy on the sales of agricultural and veterinary chemicals to partly fund the registration process.
- The UK uses sales data to facilitate the calculation of a levy, on authorization holders, which is used to partly fund the regulatory process including the costs of monitoring pesticide usage, pesticide residues in food and wildlife incidents involving pesticides.

Type of Data Collected

All 20 countries collect sales data nationwide. They do so as follows:

Type of Pesticide Sales Data Collected	**Countries**	
• volume (kg) only	8	Austria, Belgium, Czech Republic, Germany, Ireland, Korea, Netherlands and US
• volume and monetary value	11	Australia, Denmark, Finland, Greece, Hungary, Japan, Mexico, Norway, Portugal, Sweden and Switzerland
• monetary value only	1	UK

For the 19 countries collecting sales data by volume, they do so as follows:

Volume (kg) Data Collected	**Countries**	
formulated products only	7	Belgium, Czech Republic, Greece, Hungary, Japan, Korea and Sweden
both formulated products and active ingredients	7	Australia, Denmark, Finland, Mexico, Netherlands, Norway and the US
active ingredients only	5	Austria, Germany, Ireland, Portugal and Switzerland

It was noted, that a combination of data on the volume of formulated products and a knowledge of the amount of active ingredient in those products, yields data on the volume of active ingredients sold as well.

The information on formulated products is:

Formulated Products	**Countries**	
collected for individual products	14	Australia, Belgium, Czech Republic, Denmark, Finland, Greece, Hungary, Japan, Korea, Mexico, Netherlands, Norway, Sweden and US
subdivided by different uses	4	Czech Republic, Finland, Mexico and Sweden
subdivided by geographical region	2	Czech Republic, Japan

The information on active ingredient is:

Active Ingredients	**Countries**	
collected for individual products	10	Australia, Austria, Denmark, Finland, Germany, Ireland, Netherlands, Norway, Portugal and US
subdivided by different uses	1	Finland
subdivided by geographical region	0	
subdivided by biocidal classes and by product groups	1	Switzerland

With respect to monetary value, the 12 countries that collect these data do so for formulated products. Denmark collects monetary value data for groups of formulated products.

Seven of the 20 countries that collect sales data include exports and the rest do not. Of the seven, five are able to segregate the export data from the non-export data.

Eight of the 20 countries supplement the sales data with data on actual pesticide use.

Collection Process

In 18 of the 20 countries that collect pesticide sales data, a federal ministry or equivalent body is responsible for collecting the data. In Switzerland, the Swiss Society of Chemical Industries is responsible and in Mexico, the *Asociación Mexicana de la Industria Fitosanitaria* is responsible.

Staff time reported for the collection of data ranged from 5 person-hours to 12,000 person-hours per year, although the majority of the estimates fell into the range of 40 to 160 person-hours per year. Differences in definitions of what constitutes collection of data, inclusion or exclusion of other activities such as verification and analysis, and the extent to which work is contracted out may have contributed to some of the variation.

Pesticide sales data are collected from different parties:

Source of Data	**Countries**	
• pesticide manufacturers associations only	1	Korea
• individual companies and pesticide manufacturers associations	3	Netherlands, Mexico, Portugal
• individual pesticide manufacturing companies only	8	Australia, Denmark, Greece, Japan, Norway, Sweden, Switzerland
• individual companies and retailers	1	Finland
• individual pesticide manufacturing companies and others	3	Czech Republic (and farmers); Germany (and importers); US (and user- applicators)
• wholesalers	1	Ireland
• wholesalers and local distributors	1	Hungary
• holders of authorizations	1	Austria, UK
• holders of authorizations and importers and exporters	1	Belgium

All countries collect the data on a written form. In Austria and Mexico a written form is accompanied by a computer diskette. When necessary, Sweden uses follow-up telephone calls, while the Czech Republic and Ireland use follow-up visits.

Data are collected by most countries annually. Belgium and Hungary collect data twice per year and Greece and Korea four times per year.

Ten of the 20 countries (Austria, Belgium, Czech Republic, Denmark, Germany, Greece, the Netherlands, Norway, Sweden and the UK) report that they verify the accuracy and completeness of the data, using from 20 to 500 person-hours to do so.

Storage and Use of Raw Data

All countries collecting pesticide sales data, except for Ireland and Korea, maintain the data electronically. Data base management systems are most frequently used, followed by spreadsheet packages.

In the majority of countries, access to the raw data is restricted to domestic governments, often a single federal department or agency. However, the Czech Republic, Ireland, Korea, Mexico and the Netherlands also provide access to the pesticide industry, while Portugal provides open access to the raw data. Only Finland, Portugal and the US publish at least some of the raw data.

Aggregation and Analysis of the Data

With the exception of Mexico, all countries that collect pesticide sales data, aggregate the data and all aggregate it by type of pesticide (fungicide, herbicide, insecticide, etc.).

In addition:

- 5 countries (Czech Republic, Denmark, Finland, Sweden and Switzerland) also aggregate the data by use (examples: crop classes; forestry);
- 5 countries (Czech Republic, Germany, Ireland, Portugal and Switzerland) also aggregate the data by chemical family; and
- Sweden also aggregates the data according to a hazard classification.

Twelve of the 20 countries (Austria, Australia, Belgium, Czech Republic, Denmark, Germany, Hungary, Korea, the Netherlands, Sweden, Switzerland and the US) carry out analyses of the data. The analyses are carried out for several purposes, including:

- to detect year to year trends in the sales of the specific formulated products, active ingredients or groups of active ingredients;
- to monitor reductions in pesticide use;
- to set priorities for product reviews;
- to assist in the calculation of areas treated;
- to follow trends in the development of the pesticide market;
- to determine the potential importance of different types of pesticides or chemical groupings of pesticides to the environment and to resistance management; and
- to provide a check for use estimates obtained from pesticide use surveys.

Estimates of the time involved in aggregating and/or analyzing the data ranged from 40 to 3,000 person-hours per year.

All countries except Finland and the UK make the aggregated data available to the public and all countries except Belgium, Ireland, Portugal and the UK publish the data and make these publications publicly available. Descriptions of the contents or examples of the publications were provided by most of the responding countries.