

# **Guidelines for the purchase of Public Health Pesticides**



**WHO Pesticide Evaluation Scheme (WHOPES)  
Communicable Disease Control, Prevention and  
Eradication  
World Health Organization**

**[www.who.int/ctd/whopes](http://www.who.int/ctd/whopes)**

*Use pesticides **judiciously** and integrate with  
environmental management and biological  
control*

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## INTRODUCTION

Choosing a pesticide product for public health usage is becoming increasingly difficult for non-specialists in Ministries of Health, Aid Organizations, NGO's, etc.

Pesticide products are today highly developed and formulated for a particular use pattern and therefore usage in areas outside the label indications will often result in poor performance and/or may be hazardous.

The proliferation of active ingredients and formulations can be very confusing and therefore it is easy to select an inappropriate pesticide or formulation for the task intended. In addition, it is possible to select a pesticide that is poorly manufactured and formulated.

**The selection of the wrong product or formulation can result in wastage of large sums of money and result in operational failure.**

This leaflet is intended to guide you through the following steps:

- Choosing an appropriate pesticide/formulation to control the target pest,
- Choosing a good quality product in conformity to specifications,

- Preparing tenders for supply of the required product,
- Checking that the product tendered is the product supplied,
- Supply services to WHO Member States and pesticide supply sourcing.

## **1. CHOOSING AN APPROPRIATE PESTICIDE AND FORMULATION**

In selecting a pesticide and the appropriate formulation, consideration should be given to the biological effectiveness against the pest concerned, the susceptibility status of the target organism, the method of application, its safety to humans and to the environment, toxicity to non-target organisms, management of pesticide resistance, shelf life and its cost. Other considerations such as ease of use and acceptance by the population are important considerations.

The determination of cost should be based on the cost of the product as applied and not strictly on its purchase price. This includes consideration of the amount of active ingredient in the formulation, cost of shipment and handling (including local transport and storage), as well as dosage, frequency and cost of application.

There are many good publications which will advise you on choice of pesticides and formulation, but a very useful one is the WHO publication (WHO/CTD/WHOPES/97.2) *“Chemical Methods for The Control Of Vectors and Pests of Public Health Importance”*, revised in 1997<sup>1</sup>.

From this book you will be able to select the most appropriate active ingredients and formulations for the target pest and intended application.

## **2. CHOOSING A GOOD QUALITY PRODUCT**

It is not appreciated by many purchasers that products may not have the claimed level of active ingredient in them, due to poor manufacturing processes.

Even if the product has the correct level of active ingredient, it may be poorly formulated, which can adversely affect the performance.

This is the point at which many purchasing departments make mistakes since having chosen to buy a particular active ingredient, they then select the cheapest product

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<sup>1</sup> Can be obtained on request from the Communicable Disease Control, Prevention and Eradication, World Health Organization, 1211 Geneva 27, Switzerland.

offered which contains it. The result can be tonnes of product which suspends badly when diluted, blocks sprayers and gives very erratic biological performance.

Therefore the choice of a poor quality product results in the waste of large amounts of either government or other agency funds, in addition there may be serious safety and/or ecological consequences.

The *WHO specifications for public health pesticides* contains the specifications for pesticide products which have been submitted by industry and passed the WHO Pesticide Evaluation Scheme (WHOPES). The specifications include a description of the pesticide concerned and the formulations suitable for use in public health, together with sections concerning their physical and chemical characteristics, maximum content of relevant impurities, as well as methods for measuring the characteristics of the product. The specifications also include indications on the safe use of the products and recommendations on the labeling of packaging.

The WHO Specifications for Public Health Pesticides are published as "interim" and "full" specifications. The full specifications are reviewed and recommended by the WHO Expert Committee on Vector Biology and Control (VBC) "Chemistry and specifications of pesticides", which meets on regular basis. Between the formal meetings, the interim specifications are published, which are reviewed by the members of the Panel of Experts on VBC and the WHO

designated collaborating centres for quality control of pesticides. The test methods referred in the specifications should be collaboratively tested, before the interim specifications could be accepted as full.

***The WHO specifications for pesticides used in public health are part of the International Code of Conduct on Distribution and Use of Pesticides and are available on the WHO homepage on the Internet at >[www.who.int/ctd/whopes](http://www.who.int/ctd/whopes)<***

Hence, for products for which WHO specifications have been developed, purchasers should ask suppliers or manufacturers if the product they are offering conforms to WHO specification SIF/... (check for specification number). If unwilling to guarantee conformity and compliance to these specifications, they may be rejected.

It is also important to ask the supplier what after sale service is offered (e.g. technical advice, training and return policy in case of failed performance). Such additional services give added value which should be taken into consideration when comparing product prices and which the purchaser may consider when selecting a supplier.

### 3. PREPARING A TENDER FOR PURCHASE OF PESTICIDES

Details that should be included in requests for tenders (bids) for obtaining supplies of pesticides include:

- the name of the pesticide, and its type of formulation;
- The WHO specification number (where available);
- the concentration(s) of active ingredient required;
- the type of packaging required (e.g. conformity with UN packaging specifications) and the kind of labeling, including language;
- the inspection and sampling to be made after completion of the order but before its acceptance;
- the name of the inspection agent and/or laboratory responsible for determining whether the pesticide meets all the requirements of the specification and the purchase order;
- any special requirements that the purchaser may have (e.g. long term storage). This will guide the manufacturer in the preparation of a satisfactory product.

*One of the conditions for supply of pesticides should be "all products offered must conform to WHO specifications reference SIF/...". This should exclude suppliers who cannot guarantee quality.*



*It can be made a pre-condition that companies wishing to tender, supply a sample of the product, accompanied with an official certificate of analysis, ahead of the tender. This can be independently checked to see if the product conforms to the specifications.*

#### **4. Checking product on delivery**

When the product is delivered, or preferably before shipment, it is wise to take random samples from the consignment for quality control. These samples should be sent to independent analytical laboratories to ensure that the product conforms to the specifications. This should not be limited to the amount of active ingredient, but to all physical and chemical properties of the product. *Procedures for sampling are available on the WHOPES homepage as given above.*

The World Health Organization has within the Department of Control, Prevention and Eradication, Programme on Communicable Diseases, a Unit dedicated to the evaluation of pesticides for public health usage. The Unit provides guidance to national health authorities, national and international organizations involved in vector and pest control through the issue of specifications or on occasions by direct advice. The Unit also offers assistance to national

vector and pest control programmes on quality control of pesticides which are carried out on their behalf at WHO designated Collaborating Centre(s).

For further information/assistance contact:

WHO Pesticide Evaluation Scheme (WHOPES)  
Communicable Disease Control, Prevention and  
Eradication (CDS/CPE)  
World Health Organization  
20, Avenue Appia  
CH-1211 Geneva 27  
Switzerland  
Tel: (+41 22) 791 3841  
Fax: (+41 22) 791 4869

## **5. SUPPLY SERVICES TO WHO MEMBER STATES**

The supplies services are available to the national programmes & projects and agencies under the jurisdiction of the Health Administration or comparable Authority of the Member State and NGO's in official relation with WHO. This service is also available to UN sister organizations.

The WHO representative offices in most of the developing countries and the supply units at the WHO Regional

Offices in Cairo, Copenhagen, Harare, New Delhi, Manila and Washington can provide further details on how to order through the WHO supply service. You may also wish to contact:

Procurement Services  
World Health Organization  
20, Avenue Appia  
CH-1211 Geneva 27  
Switzerland  
Tel: +41 22 791 2187  
Fax: +41 22 791 4196

## **6. DIRECTORIES AND REFERENCES FOR PESTICIDE SUPPLY SOURCING**

The following publications provide useful information and details on pesticides and their manufacturers, formulators, agents, etc.:

- **The Pesticide Index**, The Royal Society of Chemistry, UK
- **CRC Handbook of Pesticides**, CRC Press, USA
- **Farm Chemicals Handbook**, Meister Publishing Co. USA

- **International Pesticide Directory**, McDonald Publications of London, UK

#### **7. WHO COLLABORATING CENTRES FOR QUALITY CONTROL OF PESTICIDES**

- Centro de Investigaciones de Plagas e Insecticidas (CIPEIN), 1603 Villa Martelli, Buenos Aires, Argentina (Attention Dr E.N. Zerba, Tel: +54 11 761 0431; Fax: +54 11 4709 5334).
- Department de Phytopharmacie, Ministere de L'Agriculture, 11 rue du Bordia, 5030 Gembloux, Belgium (Attention Dr M. Galoux, Tel: +32 81 625 262; Fax: +32 81 625 272).
- Hussein Ebrahim Jamal Research Institute of Chemistry, University of Karachi, Karachi 75270 Pakistan (Attention Professor Atta Ur- Rahman, Tel: +92 21 496 8733; Fax: +92 21 496 3124 or 3373).
- Centres for Disease Control and Prevention (CDC), Entomology Branch-F12, 4770 Buford Hwy., NE, Atlanta GA 30341-3724, USA (Attention Dr Dwight L. Mount, Tel: +1 770 488 4428; Fax: +1 770 488 4108; email: dlm2@cdc.gov).