EQUIPMENT FOR VECTOR CONTROL

Third edition

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Preface

The effective, economic and safe use of pesticides for vector control is dependent on many factors including knowledge of the susceptibility of the vector to the various pesticides available, selection of an appropriate formulation, judicious timing of applications, adequate precautions against toxic hazards to man and animals, and the availability of properly designed equipment for the application and dispersal of the formulation selected. The WHO Expert Committee on Vector Biology and Control (and previously, the WHO Expert Committee on Insecticides) keeps all these aspects of vector control under constant review. As the need arises and sufficient information is accumulated, it recommends specifications for pesticides and for the equipment used in applying them.

In 1956, WHO published the first edition of *Specifications for pesticides* which contained all the specifications established by the WHO Expert Committee up to that date. A second, enlarged edition was published in 1961.[1] Only a small section of that publication was devoted to specifications for equipment, all of which had been established prior to 1956. Since that time, considerable attention has been paid to improving the efficiency and safety of the spraying and dusting equipment used in mass campaigns, such as malaria control programmes. The experience gained in these campaigns showed up the weak points in design, and a number of innovations were introduced and evaluated in the field. It therefore became necessary to re-examine the equipment available for the application and dispersal of pesticides.

The 1963 meeting of the WHO Expert Committee on Insecticides[2] resulted in the publication in 1964 of the first edition of *Equipment for vector control* which provided information on a wide variety of equipment that could be used for the dispersal of pesticides and gave detailed specifications for the sprayers and dusters considered most important for vector control operations.

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[1] Four further editions have since appeared, the third in 1967, the fourth in 1973, the fifth in 1979 and the sixth in 1984. These no longer contain specifications for equipment used in public health, and have an amended title, *Specifications for pesticides used in public health.*

[2] WHO Technical Report Series, No. 284, 1964 (*Application and dispersal of pesticides*: fourteenth report of the WHO Expert Committee on Insecticides).

A meeting of the WHO Expert Committee on Insecticides, convened in November 1970,[1] strongly recommended the revision of *Equipment for vector control* to reflect the new knowledge available. Consequently the second edition was expanded to include a discussion of the principles of vector control by chemicals and to provide information on the use of aircraft.

In September 1976, a meeting of the WHO Expert Committee on Vector Biology and Control was held to discuss engineering aspects of vector control operations. The Committee revised the specifications for hand-operated compression sprayers, and recommended that WHO should produce interim specifications for motorized knapsack mistblowers and vehicle-mounted motorized aerosol generators. At its meeting in April 1989, the Expert Committee produced revised specifications for hand-operated compression sprayers, motorized knapsack mistblowers, vehicle-mounted motorized aerosol generators, thermal fogging equipment, and vehicle-mounted mistblowers.

In view of the considerable advances that have been made in this field over the past ten years—including: development of several new and promising types of ground insecticide application equipment; improvement in aerial spraying equipment and techniques; development of new types of nozzles; and improvement in other components of existing types of application equipment—revision and updating of the second edition was considered desirable. In October 1984, an informal consultation (see Annex 7) was held to prepare a first draft of this revision.

In the preparation of this third edition, an attempt has been made to reflect the new knowledge available and to include more practical points of interest to those involved in vector control as well as to manufacturers.