

Space spray application of insecticides for vector and public health pest control

A practitioner's guide

Communicable Disease Control, Prevention and Eradication WHO Pesticide Evaluation Scheme (WHOPES)



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Acknowledgements				
1. Introduction	7			
2. Space spray treatments	8			
2.1 Thermal fog	8			
2.2 Cold fog	9			
3. Space spray equipment	10			
3.1 Equipment for thermal fogging	10			
3.1.1 Hand-carried thermal foggers	10			
3.1.2 Vehicle-mounted thermal foggers	12			
3.1.3 Aircraft application of thermal fogs	12			
3.2 Equipment for cold fog application	12			
3.2.1 Hand-carried cold foggers	12			
3.2.2 Vehicle-mounted cold foggers	13			
3.2.3 Aircraft application of cold fogs	15			
4. Insecticide products for space spraying	16			
5. Space spray treatments –				
general considerations	17			
5.1 Optimum droplet size	17			
5.2 Droplet size parameters	19			
5.3 Flow rate	19			
5.4 Spray concentration	21			
5.5 Wind speed	21			
5.6 Wind direction	22			
5.7 Temperature effects	22			
5.8 Time of treatment	23			

Contents

6.	6. Operational guidelines			
	6.1	Pre-spray activities 6.1.1 Planning and needs assessment 6.1.2 Calibration of the equipment	25 25 27	
		6.1.3 Droplet sizing	29	
	6.2	Application procedures 6.2.1 Operator protection 6.2.2 Indoor fogging 6.2.3 Outdoor ground fogging 6.2.4 Aerial application of fogs	34 34 34 35 37	
	6.3	Monitoring spraying operations	38	
	6.4	Evaluation	38	
	6.5	Equipment maintenance	39	
	6.6	Pesticide storage and disposal	39	
7. Selected readings			40	
Annex 1. Daily application report (portable and vehicle-mounted equipment)			41	
Annex 2. Maintenance record			42	
Annex 3. Routine machine performance check			43	

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1. Introduction

This guide provides information on how to control flying insect pests and vectors of diseases by applying insecticides as space treatments. Space treatments are usually designed to provide a rapid knock-down and mortality with little or no residual effect. Such treatments must be considered in conjunction with other control methods as part of an integrated vector management programme. Space spraying provides a rapid method of control in emergency or epidemic situations and may be used for seasonal control of flying insect pests or vectors. However, it may not be ideal for all vectors or situations and as such may not be an economical method of control.

The aim of space treatments is to rapidly reduce populations of flying insect pests and vectors. An additional objective may be to reduce or interrupt the transmission cycle of insect-borne diseases. Among the disease vectors affecting public health, the most important and widespread are mosquitoes, houseflies, sandflies and other biting flies; some of these may be targeted for space treatment.

Immediate killing of actively flying insects requires a cloud of insecticide droplets that they will encounter in flight. To be cost-effective and obtain good biological efficacy, space spraying requires:

knowledge of the behaviour and biology of the target species – to understand where and when space treatments will be effective;

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