

ANNEXES

Annex 3.1: Recommended Pesticides

Hydrocarbon - Compounds

Common Name	Trade Name	Formulation	WHO Classification		Oral LD 50
			Based on A1	Real Commercial Formulation	
BHC	BHC, BHC 10 Nepal CH50 Nepal gammacide 10%, 5% Rasayan 10 DP Rasayan 5%	Wettable powder (WP) and Ready to use dust (DP)	II	DP III WP II	100
Aldrin	Andrex 30 EC Aldrin 10 DP Termox 20	Emulsifiable concentrate (EC) and DP	Ib	EC II DP III	90
Chlordane	Chlordane 10	DP	II	III	460
Endosulfan	Endocil 35 EO Hexasulfan K sulfan Thiodan 35 EC	EC		II	80
Organophosphorous					
Diazinon	Basudin 10G Neocidol 20EC Suzon 20EC	Granule (G) and EC	II	Gr Not hazardous II	300
Dichlorvos	Marvex Super 100 Neocidol 20 EC Suzon 20EC DDVP Nuvan	Soluble liquid (SL)	Ib	Ib	56
Demeton S. Methyl	Metasystox 25EC	EC	Ib	Ib	40
Dimethoate	Cygon Hexagor 30 EC Krogor Rogor 30 EC		II	II	150
Edifenphos	Hinosan 50 WP	WP	II	II	150
Fenitrothion	Nepal 5 DP Nepal 50 EC Sumithion	DP	II	DP Not hazardous II III	503
Malathion	Cythion, Kithion, Malathion, Nepal M50, Nepothion	DP EC	III	Not hazardous	2100
Monocrotophos	Monocil Monophos	SL	Ib		14

Common Name	Trade Name	Formulation	WHO Classification		Oral LD 50
			Based on A1	Real Commercial Formulation	
Methyl Parathion	Camicide Keydol Metacid 50 Malamar 50 Nepcil parathion Para Tox Paramar M50EC	EC EC	Ia	EC Ib DP III	14
Phosphamidon	Dimecron Phosphamidon Samidon 85WP	SL WP	Ia	Ia	7
Phorate	Kaymet, Phorate 10g	GR	Ia	Ib	2
Carbomates and Thiocarbamates					
Carbaryl	Hexavin 50 WP Sevin Sow	WP and DP	II	III DP Not hazardous	300
Cabofuran	Carbocil Furadan 3G Hexifuran 3G	Gr	Ib	II	8
Bendiocarb Mancozeb	Ficam Dithane M45 Manzeb, Rasayan M45	WP	II Not hazardous	Not hazardous	55 >8000
Synthetic Pyrethroids					
Cypermethrin	Cileord 25EC Cyperkic 25 EC Cypermar 10 EC Fricord, Ripcord	EC	II	II	250
Deltamethrin	Decis	EC	II	Not hazardous	135
Fenvalerate	Fenfen 20 EC Fenicron Sumicidin	EC	II	III	450
Others					
Carbendazim	Bavistin 50 WP Sten 50 WP Benganid Derosal	WP	Not hazardous		>10,000
Carboxin	Vitavax	WP	Not hazardous	Not hazardous	3820
Copper oxychloride	Blitox 50W	WP	II	Not hazardous	144
Brododiolone	Moos Moos	Readymade bait		Not hazardous	
Zinc phosphide	Nepal phos Zinc phosphide		Ib		45
Aluminium phosphide	Celphos, Quickphos	GE	-	-	-

Source: Pesticide Recommendation Committee

Annex 3.2: Pesticides Imported by Stockists in the Kathmandu Valley

Class	Unit	1988	1989
Chlorinated hydrocarbon	Kg of A.I	1908.00	1420
Organo phosphates	"	4695.14	4833.65
Synthetic parathyroids	"	6	10
Carbamates	"	60	75

Source: Compiled by Author

Annex 3.3: Pesticides Used by Bhaktapur Farmers

Class	Unit	Years				
		1986/87	1987/88	1988/89	1989/90	1990/91
BHC (OC)	Mt of Formulation	1.0	1.5	2	2.3	2.8
Vitaray	"	0.2	0.5	0.55	0.35	0.27
Carbofuran	"	0.8	0.9	0.7	0.9	1.1
Liquids	"	0.23	0.6	0.9	1.0	2.1

Source: Provided by the Agricultural Development Office, Bhaktapur (FAO/WHO)

Annex 3.4: Classification of Pesticides by Hazard Level

Class	LD 50 for rat (mg/kg body weight)			
	Oral		Dermal	
	Solids	Liquids	Solids	Liquids
Ia Extremely hazardous	5 or less	20 or less	10 or less	40 or less
Ib Highly hazardous	5-50	20-200	10-100	40-400
II Moderately hazardous	50-500	200-2000	100-1000	400-4000
III Slightly hazardous	Over 500	Over 2000	Over 1000	Over 4000

Source: Provided by the Agricultural Development Office (FAO/WHO)

Annex 3.5: Crop Loss due to Pests in the Bagmati Subregion

Commodity	Potential Production (MT)	Crop Loss due to (number in brackets indicates the percentage of actual production)				Actual Production
		Insects	Diseases	Weeds	Total	
Paddy	336429	89827 (26.7)	29942 (8.9)	Manually controlled	119769	21666
Wheat	92327	4617 (5)	8402 (9.1)	909.0 (9.8)	22068	70630
Maize	202636	25127 (12.4)	19048 (9.4)	26343 (13.0)	70518	13181
Potato	140830	9155 (6.5)	30701 (21.8)	5915 (4.2)	45771	9506
Vegetables*	Many vegetables, hence, difficult to quantify					

Source: Estimated by Author

Annex 3.6: Quality of Some Key Pesticides in the Nepali Market

	Active Ingredient indicated	Active Ingredient found
1. Metacid (Metasystox)	25% W/W	19.6% W/W
2. Metastox (Oxyaemeton methyl)	25% W/W	5.5 W/W
3. Dichlorvos	76% W/W	83-76.4% W/W
4. Dimethoate	30% W/W	25.5-26.5 W/W
5. Carbendazim	50% W/W	46% W/W
6. Aldrin	30% W/W	27.6% W/W
7. Carboxin	50% W/W	46% W/W
8. Methyl parathion (Nepsil parathion)	50% W/W	17.9% W/W
9. Dichlorvos (Nepsil Suvan)	76% W/W	51.2% W/W
10. BHC 50	50% W/W	31% W/W
11. BHC 10	10% W/W	6.5% W/W
12. (Aluminium phosphide) Quickphos	36% W/W	32% W/W

Source: Registration, Regulation, and Use of Pesticides (ADB 1992)