

An Analysis of Price Margins of Agro-chemicals

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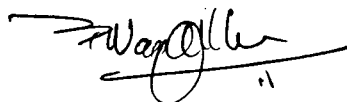
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FOREWORD

Agro-chemicals continue to be a significant and an increasing component in today's agriculture and they have substantially contributed to the increase in yields in agriculture by controlling pests and diseases. Agro-chemical business is a highly competitive one due to a large number of agro-chemical companies in Sri Lanka and they are distributing more than thousands of agro-chemicals under different trade names.

Agro-chemical trade is totally handled by the private sector. Only the licensing and registration of agro-chemicals are handled by the Registrar of Pesticides. Hence, it was relevant to understand the present performance of the industry. An analysis of price margins for agro-chemicals is not available in the country. It is also important to understand the performance of the marketing system of the agro-chemical trade. Hence, the Ministry of Agricultural Development and Agrarian Services decided to compile and analyse the price margins of the agro-chemicals and requested the Marketing, Food Policy and Agri-business Division (MFPAD) of the Hector Kobbekaduwa Agrarian Research and Training Institute (HARTI) to pursue the task.

This paper aims to bridge the information gap regarding the pricing mechanism and the margins of the agro-chemical trade in Sri Lanka focusing mainly on the performance, cost structure and price margins. Researchers have gathered a considerable amount of information and data, which will be useful for policy makers. I wish this working paper would be useful for making informed policy decisions, which are vital for all the stakeholders in the agro-chemical trade.



V.K. Nanayakkara

Director

Hector Kobbekaduwa Agrarian Research and Training Institute

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A note of appreciation is due to Mr. Indika Gunawardana, the Chairman of Crop Life Association in Sri Lanka for making arrangements to provide us the cost structure of agro-chemical industry.

We appreciate very much the officials of the Department of Imports and Exports, Haleys Agro-Products, Harrisons Chemical (Pvt) Ltd, Chemical Industries Colombo (CIC), Ceypetco, A.Baur & Company, Lankem Ceylon Ltd and BASF Finlay (Pvt) Ltd for providing the data.

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EXECUTIVE SUMMARY

Over the last five decades, the role of agro-chemicals in agricultural production, crop protection and productivity has increased in Sri Lanka. Agro-chemicals are not manufactured in Sri Lanka and are either imported in bulk for re-packing or brought in as concentrates (technical grade material) for formulation locally prior to marketing whilst agro-chemical trade is solely handled by the private sector. The Registrar of Pesticides is the licensing authority appointed by the Director General of Agriculture for the purpose of implementation of the Control of Pesticide Act No. 33 of 1980. About 37 agro-chemical importers have registered under the Registrar of Pesticides.

Agro-chemicals have substantially contributed to the increase in yields in agriculture by controlling pests and diseases. Hence, the agro-chemicals are used as a major input in crop production and on the other hand agro-chemical use results in increasing the cost of production. Prices of agro-chemicals affect the resource allocation in agriculture. Therefore, the analysis of price behaviour has become important to understand the performance of the marketing and pricing systems of agro-chemical industry. This study addresses this need by analyzing the price margins as a percentage of CIF prices of agro-chemicals marketed by different agrochemical companies in Sri Lanka. The cost structures of the firms that found during the study explain the price margins at different stages of the processing of the product. The cost structure explained in this paper represents the entire agro-chemical industry. Price margin analysis has revealed that the price gap between CIF price and label price varied from 120 per cent to 250 per cent. Agro-chemical business is a highly competitive one due to the large number of agro-chemical companies operated in Sri Lanka and they are distributing more than thousands of pesticides under different trade names. All the agro-chemicals are marketed through a controlled dealer network and more than 4,000 dealers have been trained so far. They undertake all the distribution and sales activities. Due to the high competition, the dealers give a considerable discount for traders and retailers. Findings of the present study revealed that the retail prices are often lesser than the label prices due to the amount of discount given by the distributor.

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1. INTRODUCTION

The enormous use of pesticides in agriculture commenced with the advent of the blister blight (*Exobasidium vexans*) in tea plantations in 1946. The first ever fungicide used was Bordeaux mixture, followed quickly by copper fungicides. With the introduction of the Green Revolution in the nineteen sixties, the use of modern crop protection inputs including chemical fertilizers and pesticides has increased vastly over the years. Thereafter the pesticide market grew consistently over the last decades.

Pesticides continue to be a significant and an increasing component in today's agriculture and the public health sector. Approximately 50, 30 and 20 active ingredients of insecticides, fungicides and herbicides respectively are recommended for the usage in the agriculture and the health sectors of Sri Lanka (Nugaliyadda, *et al.* 2003).

Registrar of Pesticides is the authority responsible for assuring the human health and the environmental safety so far as pesticides are concerned in Sri Lanka. The necessary provisions are provided through the Control of Pesticides Act No. 33 of 1980 amended by Act No. 6 of 1994. There are two main objectives of the Act.

- Prevention of adverse health effects due to pesticides and
- Protection of the environmental pollution from pesticides

The Act also makes provision for the control of:

- Import, formulation, transport, packing, labeling, storage, sale and use
- Establishment of the Pesticide Technical and Advisory Committee to advise the Registrar of Pesticides on all relevant aspects and to make national policies on pesticide control.

All pest control products such as those used in household, industrial, public health and veterinary sectors in addition to those used in agriculture come under the purview of this Act. Thus, the relevance of the Act encompasses all sectors of the society and covers a wider range of scientific and social disciplines. The agro-pesticide industry itself is worth more than Rs. 4,500 million.

2. OBJECTIVES OF THE STUDY

- To prepare a database on CIF prices and retail prices of agro-chemicals marketed by different agro-chemical companies in Sri Lanka.
- To find out the price margin between CIF and retail prices of agro-chemicals used in Sri Lanka.
- To find out the cost structure for the agro-chemical industry in Sri Lanka.

3. METHODOLOGY

Primary and secondary data collection.

Primary data:

- Retail prices/label prices of agro-chemicals were collected from leading agro-chemical companies in Sri Lanka and
- Field officers of the HARTI collected data on retail prices of agro-chemicals from the main dealers at different locations in Sri Lanka.

Secondary data:

- Secondary data were obtained from the Registrar of Pesticides and the Department of Imports and Exports.

Key Informant Interviews:

During the survey period, some officers of the Chemical Industries Colombo (CIC) and also officers of other agro-chemical companies were interviewed to ascertain the present performance of the agro-chemical industry in the country.

4. LIMITATIONS

The CIF prices of pesticides imported by each company were hard to get by and had to be collected from the Department of Imports and Exports. Only the label prices were collected from 7 leading agro-chemical companies. The heavy and competitive involvement of a large number of companies in the agro-chemical industry of the country deterred the researchers from getting the cost structure for each firm. They had to depend on a common cost structure for the entire industry provided by the companies.

5. PRESENT SITUATION OF THE AGRO-CHEMICAL INDUSTRY IN SRI LANKA

5.1 Registration of Agro-chemicals

All the activities related to pesticides are monitored in terms of the provisions of the Control of Pesticides Act No. 33 of 1980 amended by the Act No. 6 of 1994. The Registrar of Pesticides is the licensing authority appointed by the Director General of Agriculture for the purpose of implementation of the Act.

5.1.1 Registration Procedure

The first step in the registration procedure for a new product is the evaluation of the formulation for its bio-efficacy. If the formulation has already been tested and recommended by the respective government research institute in Sri Lanka, a repetition of the bio-efficacy test is not required. The products are registered in respect of their manufacturers and/or formulators. Registration requires an extensive assessment of product-specific data and scientific reports in order to ascertain whether the use of the product in the country has more benefits than the associated potential risks, especially for human health and the environment. Toxicity data along with chemical and other relevant aspects are extensively evaluated for the assurance of safety, quality and the efficacy of the product. The registration process usually takes 2 to 3 years for a product. It includes local bio-efficacy testing, generation of other required laboratory reports and preparation of product specific comprehensive labels.

5.1.2 Evaluation Procedure

Approval has to be obtained from the registration authority for importation of the sample for local testing. For this purpose, an application has to be submitted giving the relevant information. If the registration authority is satisfied with the information submitted and decides that the particular active ingredient/formulation is suitable for local use, a permit will be granted for the importation of an experimental sample for testing to see whether it suits the local conditions.

5.1.3 Government Research Trials

Usually the product has to be tested at a government research institute for at least two years together with reference products. If the performance of the applicant product is satisfactory, the institute will forward the product for pilot scale testing.

5.1.4 Pilot Scale Testing

This is conducted by the Plant Protection Centre which comes under the Seed Certification and Plant Protection Centre of the Department of Agriculture. The testing is carried out in farmers' fields on a larger scale (1/4 to 1/2 acre) only for one season. If the performance is satisfactory, the National Co-ordinator for Pesticides Testing forwards his/her recommendation to the respective research station which will forward it to the Director General of Agriculture, who will approve the pesticide for agricultural use.

5.1.5 Submission of the Registration Application

Once the product has gone through the process of research station trials, pilot scale testing and approval of the Director General of Agriculture, the Registrant can submit the registration application, on a standard application format and all the relevant information requested should be submitted as per guidelines.

5.2 Regulation of Marketing

All pesticides except household products such as mosquito repellents are marketed through a controlled dealer network. The restricted products are marketed according to the procedures stipulated in the product license, such as "directly offer to the authorized users". The common pesticides should be sold only through certified dealers in the field. Such dealers are certified after a rigorous certification scheme enforced by the authorized field officers nominated under the Act, from the Agricultural Extension Service of the Dept. of Agriculture. More than 4,000 dealers have been trained so far. There are nearly 100 such officers through whom the provisions of the Act are enforced in the field. In addition, a number of other officers such as Food and Drug Inspectors are also empowered for some limited field enforcement activities. The main duties of the field enforcement network include inspection, training and certification of pesticide dealers, investigating and instituting of legal action on field complaints and illegal activities and coordination with other administrative systems.

5.3 Prevention of Dumping of Hazardous Products

The manufacturer has to submit a detailed quality certificate for every consignment according to the FAO shipping guidelines. This includes details such as batch numbers, drum identification numbers, etc. for verification purposes. In some instances, pre-shipment independent analysis reports are examined prior to the issue of import approval. All product quality specifications should confirm to the FAO standards and if not the request for import is rejected. Sri Lanka is a party to the Rotterdam Convention and has been practising the procedures of the convention voluntarily along with most of the international community. This convention which operates through the FAO, ensures that there is consent from the authority of the importing country prior to the export of pesticides, which are banned or severely restricted in the country of export on health or environmental grounds.

A pesticide in itself is not hazardous, it becomes hazardous only if misused or swallowed or used against label instructions. Pesticides are heavily misused in Sri Lanka causing environmental and health hazards. It is estimated that annually about 16,000 pesticides related poisonings are reported in Sri Lanka. Poisoning was the fifth leading cause of death in state hospitals in Sri Lanka in 2001, while pesticide poisoning was the seventh leading cause. Of these, about 80 per cent were suicide attempts. In state hospitals, 1,717 deaths due to pesticide poisoning were documented and in private hospitals, another 500 to 1,000 victims had died of pesticide poisoning (Fernando, 2001). This necessitates launching of public awareness programmes on hazardous nature of pesticides.

5.4 Agro-chemical Companies in Sri Lanka

About 37 agro-chemical importers are registered under the Registrar of Pesticides (annex 01). All the companies have obtained ISO 9000 and ISO 4000 certification. About 29 such companies in Sri Lanka are members of the Crop Life Association in Sri Lanka which in turn is a member of the Crop Life International. Its role is to promote the safe use of pesticides in agriculture. The Crop Life Association of Sri Lanka was formerly known as the Sri Lanka Crop Protection Association (SLCPA). At the outset, the organization was mooted as the Pesticides Association in Sri Lanka in 1976 mainly for the purpose of protecting and promoting the interests of the pesticides industry by collective negotiations with the authorities. At present, the Crop Life Association in Sri Lanka plays a major role in the dissemination of knowledge on the safe and responsible use of pesticides in Sri Lanka.

6. IMPORTS OF PESTICIDES

Pesticides are not manufactured in Sri Lanka and are either imported in bulk for re-packing or brought in as concentrates (technical grade material) for formulation locally prior to marketing. The customs ordinance has classified all pesticide as licensed items, requiring an import license for every consignment. The Controller of Imports issues the import license only on a written approval by the Registrar of Pesticides under section 17 of the Act. The approvals are issued on consignment basis after assuring the product quality, etc. The Registrar cannot issue the import approvals unless the product is duly registered under the Act.

The Pesticide Act has contributed much to making the use of agricultural pesticides safe to the user particularly by creating the necessary background for the introduction of safer pesticides. By the Control of Pesticides Act No. 33 of 1980, WHO class 1A and 1B products were banned. Most products allowed for import today fall under WHO class II or III.

At present, agro-chemical companies in Sri Lanka import about 110 molecules as technical or formulated products and market them in different trade names. Only five companies import technical products. They are CIC, Lankem Ceylon Ltd, Haleys Agro Products, Harrisons Chemical (Pvt) Ltd. and Ceypetco. Imported technical products are available in the market namely carbofuran, 3, 4- DPA, MCPA and BPMC.

Mostly agro-chemicals are imported in bulk forms and re-packing is done at the factories of the companies. Packing is done either in bottles or packets depending on the product and there are different sizes of packaging for the same product. Total imports of formulated pesticides are higher than the imports of technical grades as shown in the table 01.

Table 01: Quantities of Annually Imported Pesticides from 2000 – 2006 (MT or KL*)

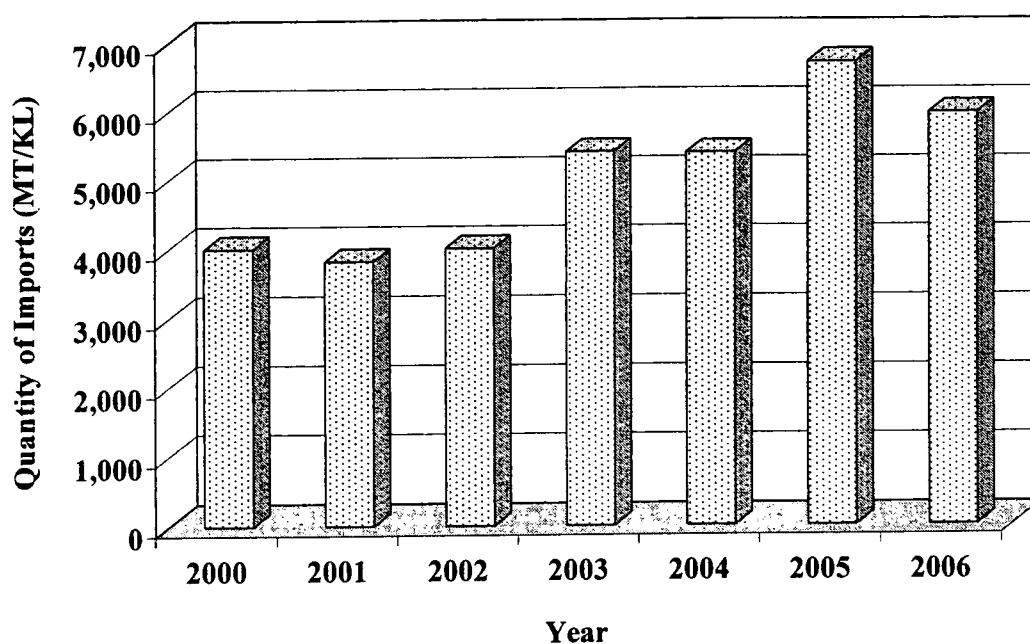
Technical Grades/Active Ingredients							
Year	2000	2001	2002	2003	2004	2005	2006
Insecticides	111.93	90.25	132.47	216.39	103.00	222.14	128.38
Herbicides	256.80	270.40	238.20	193.90	237.74	259.60	207.94
Fungicides	6.78	5.30	6.05	6.78	4.62	4.62	0.40
Sub-Total	375.51	365.95	376.72	417.07	345.36	489.72	336.72
Formulated Pesticides							
Insecticides	1,182.60	848.50	892.90	1,468.01	1,256.68	1,699.67	1,576.41
Herbicides	1,881.09	2,055.70	1,994.10	2,731.20	3,036.00	3,623.50	3,197.06
Fungicides	564.09	553.40	743.50	785.40	745.00	891.60	847.06
Sub-Total	3,627.78	3,457.6	3,630.5	4,984.61	5,037.68	6,214.77	5,620.53
Grand Total (MT or KL)	4,003.29	3,823.55	4,007.22	5,401.68	5,383.04	6,704.49	5,957.25

Source: Registrar of Pesticides

(*MT = Metric ton, KL = Kilo litres)

The total quantity of imported pesticides from 2000 to 2005 marked an increasing trend in imports and again it dropped in 2006 as shown in the figure 01. From 2000 to 2006, the total amount of active ingredients imported had declined by 10 per cent, whereas the imports of formulated pesticides increased by 55 per cent. The total quantity imported had increased by 49 per cent from 4,003 mt in 2000 to 5,957 mt in 2006. At present, herbicides are the mostly imported type of pesticides in Sri Lanka. Imports of fungicides are low, compared with the imported herbicides and insecticides.

Figure 01: Quantity of Imported Pesticides



According to the table 02, the total value of imports increased by 49 per cent from US\$ 17 million in 2000 to US\$ 25.6 million in 2005. However, there was a drop of 46 per cent in 2006 compared to that of 2005. In 2006, the value of imports of active ingredients accounted for US\$ 2.12 million, while the value of imports of formulated pesticides amounted to US\$ 13.73 million.

Table 02: CIF Values of Pesticides Imported from 2000 – 2006 (US\$ '000)

Technical Grades/Active Ingredients							
	2000	2001	2002	2003	2004	2005	2006
Insecticides	1,452.87	1,084.09	991.67	1,900.08	755.60	1,754.20	1,161.29
Herbicides	1,736.82	1,252.54	746.26	717.95	989.43	1,329.45	950.53
Fungicides	154.22	76.26	68.34	121.56	129.03	155.39	12.36
Sub-Total	3,343.91	2,412.89	1,806.27	2,739.59	1,874.06	3,239.04	2,124.18
Formulated Pesticides							
Insecticides	4,218.46	3,321.50	4,817.90	5,925.87	4,877.51	6,694.50	7,543.23
Herbicides	7,612.44	7,513.70	6,737.00	8,200.60	9,438.60	12,443.30	1,869.68
Fungicides	1,971.30	1,790.20	2,738.30	2,654.20	2,504.50	3,220.00	2,194.63
Sub-Total	13,802.28	12,625.4	14,293.2	16,780.67	16,820.61	22,357.80	11,607.54
Total CIF Value of Imported Pesticides	17,146.19	15,038.29	16,099.47	19,520.26	18,694.67	25,596.84	13,731.72

Source: Registrar of Pesticides

About 25 major pesticides manufacturing companies operate in the world. It is found that the global sales of pesticides are increasing annually. In Sri Lanka, from 2000 to 2005 the total quantity of agro-chemicals used had increased by 30 per cent from 6,075 mt to 7,927 mt but in 2006 it dropped to 6,751.88 mt as shown in the table 03.

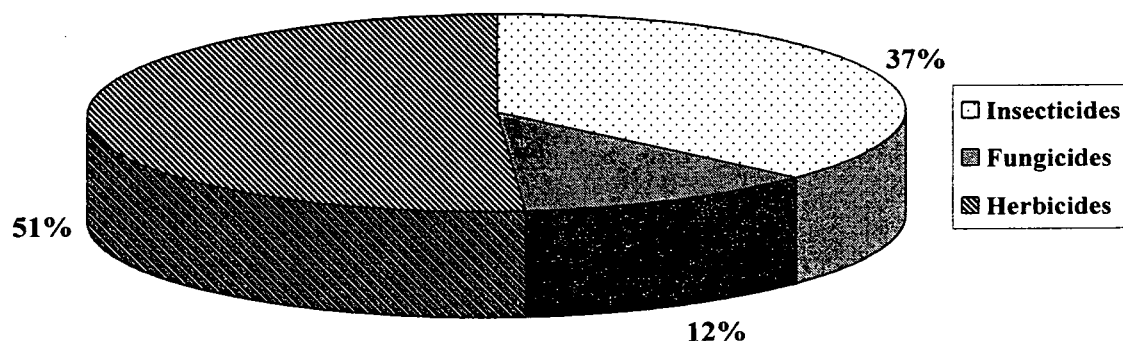
Table 03: Quantities of Agro-chemicals Used in Sri Lanka from 2000 - 2006 (MT or KL)

Type of Agro-chemical	2000	2001	2002	2003	2004	2005	2006
Insecticides	2,445.20	2,061.40	2,295.10	2,359.40	1,455.64	2,893.32	2,609.65
Fungicides	571.60	598.20	706.20	731.33	760.14	950.71	881.17
Herbicides	3,058.20	2,557.70	2,782.70	3,012.80	3,634.62	4,083.10	3,261.06
Total	6,075.00	5,217.30	5,784.00	6,103.53	5,850.40	7,927.13	6,751.88

Source: Registrar of Pesticides

As shown in the figure 02, the herbicides were the mostly used accounting for 51 per cent of the total quantity of agro-chemicals used over the period from 2000-2006. The corresponding figures for insecticides and fungicides were 37 per cent and 12 per cent respectively.

Figure 02: Quantities of Agro-chemicals Used in Sri Lanka (2000-2006)



7. CIF PRICES AND LABEL PRICES OF AGRO-CHEMICALS

The same product of agro-chemicals is imported by different companies. As an example, chloropyrifos has been imported from different countries in May, 2006 by different pesticides importing companies as given in the table 04. There are variations in CIF prices for the same product imported by different companies in a particular month.

Table 04: CIF Prices of Some Pesticides Imported by Different Companies (2006)

Type of Pesticide	CIF Prices (Rs.) and Countries from which the Pesticides were Imported						
	CIC	Hayleys	Lankem	Agro Technica	BASF	A.Baur	Harcross
Chloropyrifos 40 EC (May)	379.30/L (Singapore)	413.00/L (India)	357.00/L (Malaysia)	381.00/L (Singapore)	439.00/L (Denmark)	N.A.	360.00/L (Singapore)
Glyphosate 360g/l (March)	211.50/L (Malaysia)	278.00/L (Malaysia)	277.00/L (Malaysia)	246.00/L (Malaysia)	212.00/L (China)	212.00/L (Malaysia)	207.00/L (Malaysia)
BPMC (March)	371.70/kg (South Korea)	N.A.	495.00/kg (Japan)	299.00/kg (Singapore)	N.A.	N.A.	309.00/kg (Singapore)

Source: Department of Imports & Exports
N.A. – Not Available

The table 05 describes the label prices/retail prices for different pesticides marketed by the selected agro-chemical importing companies. It clearly shows that the same pesticide is marketed in different trade names. A slight variation exists between label prices/retail prices of different companies. However, Ceypetco, a semi-government company maintains a lower price level (label price) for its products compared with that of other companies.

Table 05: Retail Prices of Selected Agro-chemicals Marketed by Different Agro-chemical Companies in Sri Lanka (June, 2006)

Chemical	Company	Trade Name	Pack Size	Retail Price (Rs.)
Carbofuran 3% G (Insecticide)	Ceypetco	Carbofuran 3G	2 kg	250/=
			500 g	90/=
	CIC	Carbofuran 3G	2 kg	315/=
			500 g	105/=
	Hayleys	Curateer 3%	2 kg	310/=
			500 g	110/=
	Lankem	Polydan	2 kg	280/=
			500 g	100/=
	Harrisons	Harfudan	2 kg	345/=
			500 g	100/=
	BASF	Finchem Carbofuran	2 kg	290/=
			500 g	100/=
	A.Baur	Carbofuran 3G	2 kg	310/=
			500 g	120/=

Table 05 (Contd.): Retail Prices of Selected Agro-chemicals Marketed by Different Agro-chemical Companies in Sri Lanka (June, 2006)

Chemical	Company	Trade Name	Pack size	Retail Price (Rs.)
Glyphosate 36% (Weedicide)	Ceypetco	Ceypetco Glyphosate	4 L	1,928/=
			2 L	1,005/=
			1 L	512/=
			400 ml	220/=
	CIC	D-Dash	4 L	2,700/=
			2 L	1,400/=
			1 L	750/=
			400 ml	325/=
	Hayleys	Surpass LC	4 L	2,695/=
			2 L	1,430/=
			1 L	740/=
			400 ml	330/=
	Lankem	Roundup	4 L	2,650/=
			2 L	1,360/=
			1 L	700/=
			400 ml	315/=
	Agro Technica	Powermet	4 L	2,780/=
			2 L	1,395/=
			1 L	755/=
			400 ml	330/=
	Harrisons	Come-on	4 L	2,580/=
			2 L	1,300/=
			1 L	680/=
			400 ml	300/=
	BASF	Destroy	4 L	2,650/=
			2 L	1,400/=
			1 L	730/=
			400 ml	310/=
3, 4-DPA EC 36% (Weedicide)	Ceypetco	3-4 DPA	3 L	1,752/=
			2 L	600/=
			400 ml	250/=
	Hayleys	Surcopur EC 36%	3 L	2,250/=
			2 L	790/=
			400 ml	350/=
	Lankem	Top	3 L	2,500/=
			2 L	840/=
			400 ml	350/=
	Agro Technica	Propanil	3 L	2,280/=
			2 L	840/=
			400 ml	350/=
	Harrisons	Supreon	3 L	2,160/=
			2 L	750/=
			400 ml	330/=
	BASF	Sure	3 L	2,345/=
			2 L	820/=
			400 ml	345/=
	A.Baur	3-4, DPA	3 L	2,275/=
			2 L	795/=
			400 ml	365/=

Table 05 (Contd.): Retail Prices of Selected Agro-chemicals Marketed by Different Agro-chemical Companies in Sri Lanka (June, 2006)

Chemical	Company	Trade Name	Pack size	Retail Price (Rs.)
MCPA 40 EC (Weedicide)	Ceypetco	MCPA 40	4 L	2,096/=
			1 L	560/=
			400 ml	240/=
	CIC	Agroxone	4 L	2,125/=
			1 L	550/=
			400 ml	250/=
	Hayleys	Hedonal M	4 L	2,150/=
			1 L	595/=
			400 ml	250/=
	Lankem	M 50	4 L	2,290/=
			1 L	595/=
			400 ml	240/=
	Agro Technica	MCPA 40	4 L	2,160/=
			1 L	595/=
			400 ml	255/=
	Harrisons	Super 40	4 L	1,990/=
			1 L	530/=
			400 ml	245/=
	BASF	Finchem MCPA 40	4 L	2,110/=
			1 L	565/=
			400 ml	255/=
	A.Baur	Herbinol-2	4 L	2,525/=
			1 L	635/=
			400 ml	260/=
MCPA 60 EC (Weedicide)	Ceypetco	MCPA 60	4 L	2,790/=
			1 L	735/=
			400 ml	315/=
	CIC	MCPA 60	4 L	3,150/=
			1 L	865/=
			400 ml	385/=
	Hayleys	Hedonal M	4 L	3,150/=
			1 L	890/=
			400 ml	375/=
	Lankem	Magic 60	4 L	3,100/=
			1 L	915/=
			400 ml	370/=
	Agro Technica	MCPA 60	4 L	3,140/=
			1 L	860/=
			400 ml	355/=
	Harrisons	Super 60	4 L	3,150/=
			1 L	865/=
			400 ml	385/=
	BASF	Finchem MCPA 60	4 L	3,100/=
			1 L	810/=
			400 ml	332/=
	A.Baur	Baurmat 60	4 L	3,300/=
			1 L	860/=
			400 ml	365/=

Source: Ceypetco, CIC, Hayleys, Lankem, Agrotechnica, Harrisons, BASF and A.Baur

8. PRICE MARGIN BETWEEN CIF AND COMPANY RETAIL PRICES

CIF prices and label prices for products are given on per litre or kilo basis. According to the bulk of quantity imported by different companies, CIF prices were calculated for a unit value in Sri Lankan rupees as listed in the table. Price margin between CIF and company retail price/label price is given in the table 06.

Table 06: CIF Prices and Retail Prices of Agro-chemicals Imported by Different Agro-chemical Companies in Sri Lanka (2006)

Company	Name of Agro-chemical	Type of Agro-chemical	Country from which Imported	Unit Value of CIF Price (Rs.)	Company Retail Price (Rs.)	Price Spread	As a % of CIF Price
Hayleys Agro-Products Ltd.	FOLICUR EW 250 (Tebuconazole)	Fungicide	Thailand	2,121/L (April)	5,500/L (May)	3,379/=	159
	SURCOPUR EC 36% (3, 4-DPA)	Weedicide	Columbia	288/L (May)	790/L (May)	502/=	174
	SURPASS LC 36% (Glyphosate)	Weedicide	Malaysia	278/L (April)	740/L (May)	462/=	166
A. Baur & Company	DIAZOL EW 50% (Diazinon 50%)	Insecticide	Israel	465/L (July)	1,170/L (July)	705/=	151
	VONDOZEB 80 WP (Mancozeb 80%)	Fungicide	Holland	356/kg (June)	845/kg (July)	489/=	137
	BAURSATE 36 (Glyphosate 36%)	Weedicide	China	211/L (May)	660/L (June)	449/=	213
	CARBOFURAN 3% G (Mancozeb 80%)	Insecticide	Malaysia	61/kg (May)	155/kg (June)	94/=	154
	DIURON 80 WP (Diuron 80%)	Weedicide	Israel	635/kg (February)	1,360/kg (March)	725/=	114
	3-4 DPA (Propanil 36%)	Weedicide	Singapore	315/L (March)	785/L (March)	480/=	149
	BAURMAT 60 (MCPA)	Weedicide	UK	361/L (April)	860/L (June)	499/=	138

**Table 06 (Contd.): CIF Prices and Retail Prices of Agro-chemicals Imported by
Different Agro-chemical Companies in Sri Lanka (2006)**

Company	Name of Agro-chemical	Type of Agro-chemical	Country from which Imported	Unit Value of CIF Price (Rs.)	Company Retail Price (Rs.)	Price Spread	As a % of CIF Price
BASF-Finlay (Pvt) Ltd.	DESTROY (Glyphosate 360g/l)	Weedicide	China	212/L (May)	730/L (June)	518/=	244
	POLYRAM M (Maneb 80% WP)	Fungicide	Holland	341/kg (June)	880/kg (June)	539/=	158
	PRINCE GR (Fipronil 3g/kg)	Insecticide	Indonesia	111/kg (April)	275/kg (April)	164/=	148
	FINCHEM MANCOZEB (Mancozeb 80% WP)	Fungicide	India	226/kg (April)	600/kg (May)	374/=	165
Harrisons Chemical (Pvt) Ltd.	DUCRON (Diuron 80% WP)	Weedicide	Malaysia	622/kg (June)	1,350/kg (June)	728/=	117
	COME-ON (Glyphosate 360g/l SL)	Weedicide	Malaysia	210/L (June)	680/L (June)	470/=	224
	SUPER 60 (MCPA 600g/l EC)	Weedicide	U.K.	366/L (March)	865/L (April)	499/=	136
CIC Ltd.	GRAMOXONE (Paraquat 20%)	Weedicide	Belgium	218/L (June)	750/L (July)	532/=	244
	CARBOFURAN 3 G	Insecticide	Singapore	69/kg (June)	158/kg (July)	89/=	129
	DIURON 80 PCT WP	Weedicide	U.K.	570/kg (June)	1,360/kg (July)	790/=	139
	Dithane M 45 (Mancozeb 80%)	Fungicide	France	331/kg (March)	850/kg (March)	519/=	157

Source: CIF Prices: Department of Imports and Exports

Label Prices: Hayleys, CIC, Harrisons, BASF and A.Baur Company

The table 06 reveals a huge price gap between CIF price and label price and as a percentage, it varies from 120 per cent to 250 per cent.

9. COST STRUCTURE OF AGRO-CHEMICAL INDUSTRY IN SRI LANKA

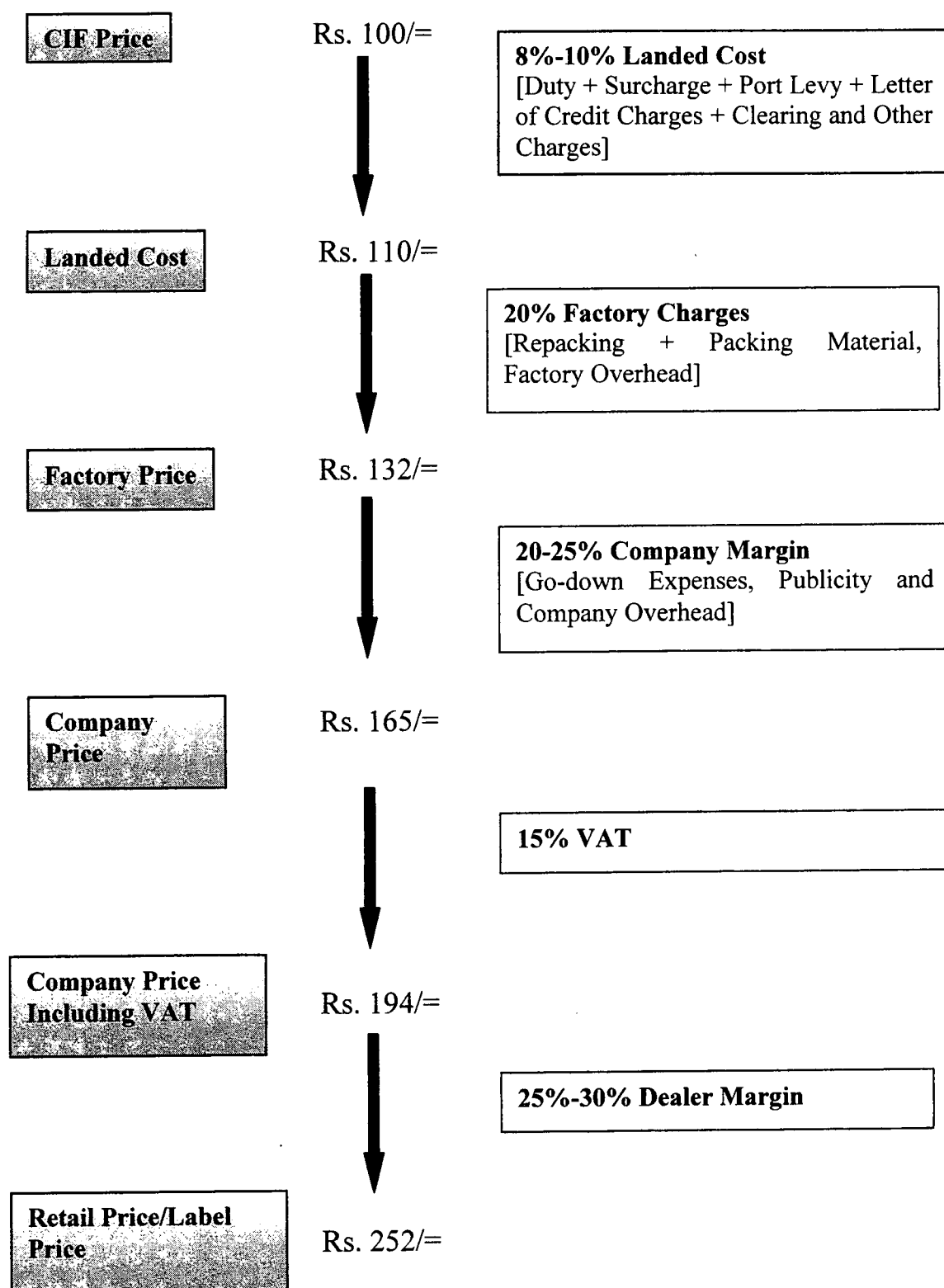
The cost structure (figure 3) explains the price margin at different stages of the processing of the product. This is a common cost structure for all the agro-chemical companies and there can be variations at different stages depending on the product and the company. In the given example, the CIF price of a particular product was taken as Rs. 100/=.

The price difference between landed cost and CIF price is 8 per cent – 10 per cent. This cost involvement is for duty, surcharge, port levy, letter of credit charges, clearing and certain other charges. For example the price of the product is Rs. 110/= at that stage. Then the products are transported to the factory and factory charges are nearly 20 per cent for repacking, and factory overheads. At that level, the price of a product is Rs. 132/= as given in the figure 2. Normally, companies maintain a 20 per cent – 25 per cent gross company margin which includes company overheads, dealer incentives, re-distribution allowance, promotional expenses, publicity, etc. The net profit margin for the company is 4 per cent – 5 per cent. As in the example, the company price is around Rs. 165/=.

Agro-chemicals are subjected to a 15 per cent VAT and the product price goes up to Rs. 194/= as indicated in the example. Agro-chemical companies have a number of dealers who undertake all the distribution and sales activities. Normally, the dealer margin varies from 25 per cent – 30 per cent. Therefore, the retail price of a product is high. As in the example, it is Rs. 252/=. It is clear that the difference between CIF and retail price (label price) is around 150 percent according to the example, whereas in our study it varies from 120 per cent to 250 per cent.

Agro-chemical business is a highly competitive one due to a large number of agro-chemical companies in Sri Lanka and they are distributing more than thousands of pesticides under different trade names. With this high competition, dealers give a considerable discount for traders and retailers which is around 20 per cent – 25 per cent. Therefore, the net profit margin for a distributor is around 5 per cent. When farmers purchase pesticides from traders, they get a discount from the label price of a product. Therefore, the gap between CIF price and retail price would be less than 150 per cent as described in the table 06 and figure 03.

Figure 03: The Cost Structure – Agro-chemical Industry in Sri Lanka



Source: The Cost Structure for Agro-chemical Companies of Crop Life Association in Sri Lanka

10. RETAIL PRICES OF AGRO-CHEMICALS AND DISCOUNT PERCENTAGE

The table 07 explains the label and retail prices of pesticides for the same pack size in different locations and the calculated discount percentage. As shown in the table, the prices are lesser than the label prices and it is because of the amount of discount given by the dealers. Discount percentage varies from 10 per cent-30 per cent. Hence, the net profit margin for a distributor can be lesser than 5 per cent. For the same pack size, the discount percentage varies from location to location. Retail prices of pesticides were collected from the main dealers in different locations. Therefore, they give a high discount percentage. At village level, the distribution of agro-chemicals is carried out by sub-dealers. Hence, the expected price discount is lower than the discount from main dealers and the farmers in rural areas are not benefited with a higher discount percentage. However, the dealers maintain a higher discount in major agricultural producing areas due to high competition.

Table 07: Retail Prices of Agro-chemicals in Selected Districts/Areas in Sri Lanka

Company	Name of Pesticides	Type of Pesticides	Company Retail Price		Name of District/Area	Retail Prices (June)		Discount %
			Pack Size	Price (Rs.)		Pack Size	Price (Rs.)	
Lankem Ceylon Ltd.	SELECRON 50% EC (Profenofos)	Insecticide	400 ml	1,070/=	N'Eliya	400 ml	840/=	21
							850=-	21
	ROUNDUP (Glyphosate 36%)	Weedicide	400 ml	315/=	Keppetipola	400 ml	864/=	19
					N'Eliya	400 ml	250/=	21
							265/=	16
					Matara	400 ml	240/=	23
					Ampara	400 ml	230/=	27
							235/=	25
					Thambuttegama	400 ml	260/=	17
							250/=	21
	ELSAN 50% EC (Phenthoate)	Insecticide	400 ml	545/=	Amapara	400 ml	400/=	27
	SATUNIL 60 (Thiobencarb + Propanil)	Insecticide	2 L	1,925/=	Matara	2 L	1,440/=	25
					Tissamaharama	2 L	1,600/=	17
	NOMINEE (Bispyribac sodium 100 SC)	Weedicide	100 ml	1,490/=	Ampara	100 ml	1,100/=	26
					Embilipitiya	100 ml	1,120/=	25
							1,100/=	26
					Matara	100 ml	1,150/=	23
	LANNATE 40% SP (Methomyl)	Insecticide	100 g	385/=			1,120/=	25
					Keppetipola	100 g	304/=	21

Table 07 (Contd.): Retail Prices of Agro-chemicals in Selected Districts/Areas in Sri Lanka

Company	Name of Pesticides	Type of Pesticides	Company Retail Price		Name of District/Area	Retail Prices (June)		Discount %
			Pack Size	Price (Rs.)		Pack Size	Price (Rs.)	
Hayleys Agro-Products Ltd.	ANTRACOL WP 70% (Propineb)	Fungicide	500 g	450/=	Tissamaharama	500 g	360/=	20
							375/=	17
			1 kg	860/=	Marassana	500 g	360/=	20
							365/=	19
	FOLICUR EW 250 (Tebuconazole)	Fungicide	50 ml	290/=	Keppetipola	1 kg	688/=	20
					Ampara	50 ml	235/=	19
							240/=	17
	SURCOPUR LC 36% (Glyphosate)	Weedicide	400 ml	350/=	Ampara	400 ml	235/=	33
							240/=	31
	SURPASS LC (Glyphosate 36%)	Weedicide	400 ml	330/=	N'Eliya	400 ml	245/=	25
							255/=	23
A. Baur & Company	DIAZOL EW 50% (Diazinon)	Insecticide	400 ml	510/=	Tissamaharama	400 ml	365/=	28
							375/=	26
					Polonnaruwa	400 ml	390/=	23
	VONDOZEB 80 WP (Mancozeb 80%)	Fungicide	500 g	465/=	Tissamaharama	500 g	360/=	23
			1 kg	845/=	N'Eliya	1 kg	615/=	27
					610/=	28		
	BAURSATE (Glyphosate 36%)	Weedicide	1 L	660/=	Embilipitiya	1 L	440/=	33
							460/=	30
	4 L	2,485/=	Tissamaharama	4 L	1,800/=	24		
					1,750/=	30		
CAPTAN WP 50% (Captan)	Fungicide	200 g	220/=	Dambulla	200 g	170/=	23	
						165/=	25	
				Tissamaharama	200 g	180/=	18	
						195/=	11	
BASF-Finlay (Pvt) Ltd.	POLYRAM M (Maneb 80% WP)	Fungicide	500 g	490/=	Marassana	500 g	350/=	29
								365/=

Table 07 (Contd.): Retail Prices of Agro-chemicals in Selected Districts/Areas in Sri Lanka

Company	Name of Pesticides	Type of Pesticides	Company Retail Price		Name of District/Area	Retail Prices (June)		Discount %
			Pack Size	Price (Rs.)		Pack Size	Price (Rs.)	
Harrisons Chemical (Pvt) Ltd.	COME-ON (Glyphosate 360 g/l)	Weedicide	1 L	680/=	Dambulla	1 L	460/=	32
	PATTAS (Chloropyrifos)	Insecticide	400 ml	520/=	N'Eliya	400 ml	410/=	21
					Badulla	400 ml	390/=	25
						400 ml	475/=	9
					Keppetipola	400 ml	824/=	20
	CALCRON (Profenophos 50 EC)	Insecticide	400 ml	1,030/=				
	TREBON (Etofenprox 100 g/l EC)	Insecticide	400 ml	850/=	N'Eliya	400 ml	810/=	5
	ERASER (Hexaconazole 50 g/l EC)	Fungicide	200 ml	500/=	Ampara	200 ml	375/=	25
							380/=	24
					Polonnaruwa	200 ml	400/=	20
	CALCRON 50 EC (Profenphos 500 g/l EC)	Insecticide	400 ml	970/=	Dambulla	400 ml	690/=	29
							665/=	31
	DEMRO (Dimethoate 400 g/l EC)	Insecticide	400 ml	370/=	Dambulla	400 ml	260/=	30
	SUPERREON (Propanil 360 g/l EC)	Weedicide	400 ml	330/=	Thambuththegama	400 ml	280/=	15
							260/=	21
	ZORO (Abamectin 18 g/l EC)	Insecticide	200 ml	1,800/=	N'Eliya	200 ml	1,625/=	10
							1,650/=	8

Table 07 (Contd.): Retail Prices of Agro-chemicals in Selected Districts/Areas in Sri Lanka

Company	Name of Pesticides	Type of Pesticides	Company Retail Price		Name of District/Area	Retail Prices (June)		Discount %
			Pack Size	Price (Rs.)		Pack Size	Price (Rs.)	
CIC (Pvt) Ltd.	GRAMOXONE (Paraquat 20%)	Weedicide	1 L	750/=	Dambulla	1 L	530/=	29
							540/=	28
					Keppetipola	1 L	600/=	20
	ACTARA 25WG	Insecticide	50 g	800/=	Thambuttegama	50 g	600/=	25
							650/=	19
	DITHANE M45 (Mancozeb 80%)	Fungicide	1 kg	850/=	N'Eliya	1 kg	650/=	24
							690/=	19
	SOFIT 30 EC	Weedicide	400 ml	821/=	Keppetipola	1 kg	675/=	21
					Matara	400 ml	630/=	23
							625/=	24
Agro-Technica Ltd.	BULLET50% (Carbedazim)	Fungicide	200 g	480/=	Thambuttegama	400 ml	680/=	17
					N'Eliya	200 g	432/=	10
					Embilipitiya	200 g	380/=	21
	MANCOZEB WP 80%	Fungicide	500 g	350/=	N'Eliya	500 g	315/=	10
	BPMC EC 50%	Insecticide	200 ml	200/=	Ampara	200 ml	145/=	28
	COMMANDO EC 40% (Chloropyrifos)	Insecticide	400 ml	495/=	Tissamaharama	400 ml	425/=	14
					Embilipitiya	400 ml	370/=	25
					N'Eliya	400 ml	445/=	10

Source: HARTI, Field Information Network

11. FINDINGS

1. According to the cost structure of Agro-chemical companies, the landed cost is around 8 per cent-10 per cent. They maintain a 40 per cent-45 per cent of cost, as company margin and factory charges.
2. Pesticides companies maintain a dealer margin of 25 per cent-30 per cent and this varies depending on the companies.
3. According to the cost structure, the price gap between CIF prices and label prices is around 150 per cent. However, it varied from 120 per cent to 250 per cent in field observations. This depended on the product and company. Company's factory charges are nearly 20 per cent and they maintain a 20 per cent – 25 per cent gross company margin. As the undertaking, highly competitive companies have to spend more on dealer incentives and publicity. Further, all pesticides are subjected to 15 per cent VAT. Due to these high margins, a high price gap is reported between CIF and retail price.
4. The stiff competition prompts the main dealers to give a high discount percentage and according to the companies, it varies from 20 per cent to 25 per cent with a net margin of 5 per cent. However, in field observations, it varied from 10 per cent to 30 per cent and the net margin for the distributor would more or less change by 5 percent.
5. Retail prices of pesticides are lower than the label prices in most of the agricultural producing areas.
6. Retail price of a product for a same pack size varies from location to location depending on the discount percentage.

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Annex 01: List of Agro-chemical Companies in Sri Lanka

1. Harrisons Chemical (Pvt) Ltd*
2. Hayleys Agro Products Limited*
3. M Chems (Pvt) Ltd*
4. Mackwoods Ltd
5. DTW International (Pvt) Ltd*
6. BASF Finlay (Pvt) Ltd*
7. Opex Holding (Pvt) Ltd*
8. Agro Technica Ltd*
9. Zagro Singapore (Pvt) Ltd*
10. A. Baur & Company Ltd*
11. Lankem Ceylon Ltd*
12. Monsanto India Company
13. Chemical Industries Colombo (CIC)*
14. Ceylon Petroleum Corporation*
15. Asiatic Agricultural Colombo
16. Novela (Pvt) Ltd*
17. Bayer Thai Company Ltd
18. Farmchemie (Pvt) Ltd*
19. Nukemi NN (Ceylon) Ltd*
20. Sabaragamuwa Fertilizers (Pvt) Ltd*
21. Amcrop (Pvt) Ltd
22. Innovative Pesticide Market*
23. Teck Agro Fertilizer (Pvt) Ltd
24. Unipower (Pvt) Ltd*
25. J.L.Morison son & Jones*
26. Kemtek (Pvt) Ltd*
27. Shankem (Pvt) Ltd
28. Ploychemex (Pvt) Ltd
29. Crystal Green (Pvt) Ltd*
30. International Crop Sciences
31. Halchem Agro Services (Pvt) Ltd
32. Farm Land Agro Chemicals
33. Watawala plantation Ltd
34. Oasis Marketing Company*
35. Monasto Singapore Ltd*
36. Arysta Life Science Corporation*
37. Farm & Chemical Products*

*Members of Crop Life Sri Lanka

Annex 02: List of Pesticides Registered by the Registrar of Pesticides

	Pesticide	Type		Pesticide	Type
1	2, 4-D 720 g/l	Weedicide	35	Imidacloprid 70%	Insecticide
2	2, 4-D 550 g/l	Weedicide	36	Kasugamycin 20 g/l	Fungicide
3	Akachlor 480 g/l	Weedicide	37	Mancozeb 80%	Fungicide
4	Bitertanol 300 g/l	Fungicide	38	Maneb 80%	Fungicide
5	Buprofezin 10%	Insecticide	39	MCPA 400 g/l	Weedicide
6	Captan 50%	Fungicide	40	MCPA 600 g/l	Weedicide
7	Carbaryl 85%	Insecticide	41	Methomyl 40%	Insecticide
8	Carbaryl 480 g/l	Insecticide	42	Metriuzin 70%	Weedicide
9	Carbendazim	Fungicide	43	Oxadiazon + Propanil	Weedicide
10	Carbofuran 3%	Insecticide	44	Oxydemeton + Methyl	Insecticide
11	Carbosulfan 200 g/l	Insecticide	45	Oxyfluorfen 240 g/l	Weedicide
12	Chlorfluazuron 50 g/l	Insecticide	46	Paraquat 200 g/l	Weedicide
13	Chlorothalonil 500 g/l	Insecticide	47	Pencycuron 25%	Fungicide
14	Chlorpyrifos 400 g/l	Insecticide	48	Phenthoate 500 g/l	Insecticide
15	Chlorpyrifos 200 g/l	Insecticide	49	Pretilachlor 300 g/l	Weedicide
16	Copper 50%	Fungicide	50	Profenofos 500 g/l	Insecticide
17	Diazinon 5%	Insecticide	51	Propamocarb 607 g/l	Fungicide
18	Dimethoate 400 g/l	Insecticide	52	Propanil 360 g/l	Weedicide
19	Diuron 80% W	Fungicide	53	Propiconazole 250 g/l	Fungicide
20	Edifenphos 300 g/l	Fungicide	54	Propineb 70%	Fungicide
21	Ethephon 52 g/l	Fungicide	55	Propoxur 1%	Insecticide
22	Etofenprox 100 g/l	Insecticide	56	Propoxur 200 g/l	Insecticide
23	Fenamiphos 5%	Insecticide	57	Prothiophos 500 g/l	Insecticide
24	Fenobucarb 500 g/l	Insecticide	58	Quinalphos 250 g/l	Insecticide
25	Fenoxaprop-p-ethyl 75 g/l	Weedicide	59	Quinclorac 250 g/l	Weedicide
26	Fenthion 500 g/l	Insecticide	60	Sethoxydin 125 g/l	Weedicide
27	Fipronil 0.3%	Insecticide	61	Sulphur 80%	Fungicide
28	Fipronil 50 g/l	Insecticide	62	Tebuconazole 250 g/l	Fungicide
29	Flutolanil 50%	Fungicide	63	Thiodicarb 375 g/l	Insecticide
30	Folpet 50%	Fungicide	64	Thiophanate-methyl 70%	Fungicide
31	Formothion 330 g/l	Insecticide	65	Thiram 80%	Fungicide
32	Glyphosate 360 g/l	Weedicide	66	Trichorfon 500 g/l	Insecticide
33	Glyphosate 120 g/l	Weedicide	67	Azadiractin	Insecticide
34	Imidacloprid 200 g/l	Insecticide	68	Acetamiprid 20%	Insecticide

Annex 02 (Contd.) List of Pesticides Registered by the Registrar of Pesticides

	Pesticide	Type		Pesticide	Type
69	Bispyribac-sodium	Weedicide	82	Clomazone + Propanil	Weedicide
70	Hexaconazole 50 g/l	Fungicide	83	Cyclosulfamuron 10%	Weedicide
71	Cyhalofop-butyl 100 g/l	Weedicide	84	Ethoxysulfuron 15%	Weedicide
72	Pendimethalin 300 g/l	Weedicide	85	Methoxyfenozide 240 g/l	Insecticide
73	Mancozeb + Copper	Fungicide	86	Thiacloprid 240g/l	Insecticide
74	MCPA +2,4-D	Weedicide	87	Glofosinate ammonium 150 g/l	Weedicide
75	Mancozeb + Copper	Fungicide	88	Thiamethoxam	Insecticide
76	Pendimethalin + Propanil	Weedicide	89	Abamectin 18 g/l	Insecticide
77	Isoprothiolane 400 g/l	Fungicide	90	Pyribenzoxim 50 g/l	Weedicide
78	Fentrazamide + Propanil	Weedicide	91	Chromafenozide 50 g/l	Insecticide
79	Copper	Fungicide	92	Thiophanate-methyl + Thiram	Fungicide
80	Thiobencarb + Propanil	Weedicide			
81	Propineb + Oxadixyl	Fungicide			