



Part 1

1. General Information

Objectives and Targets

Pato Chemical Industry Plc. was established on 6 October 1973 to be Importer, formulator, repacker, and distributor of herbicide, insecticide, acaricide, molluscicide, fungicide, and plant growth regulator in liquid, powder, and granule form for use in rice, plantation crops, fruit orchards, vegetables, and livestock having a factory located in Bangpoo Industrial Estate with over 340 dealers, wholesalers, and repackers as our distribution channels in every region of Thailand currently

The company is the importer, formulator, and distributor of pesticide. In 2011, Pato has invested 100% stake in Pato Crop Care Co., Ltd.

The company is the importer, formulator, and distributor of pesticide.

Major Type of Imports

1. *Technical Grade (TG)*: is a concentrated chemicals which are used in formulations to produce final products according to the specified formulas
2. *Finished Product (FP)*: is the product ready for use. Most of the imported FD is in liquid and solid form in bulk sizes. Therefore, repackaging is needed before distribution.

About 80% of the company's imported products are TG for formulation at the factory before distribution resulted in lower cost of raw material as compared with other competitors who import finished product for repackaging. TG has longer shelf-life than FP and can be formulated according to the requirements which is more suitable for the environment. Chemical pesticide in the market can be in many forms e.g. liquid, power, and granule for safety in moving and storing. In the production process, there are 2 main ingredients in chemical pesticide; active and inert ingredients. "Active Ingredients" are chemical substance called by its chemical names for different uses of purposes. "Inert Ingredients" are substance to combine with the active chemical to make it in the forms suitable for different types for uses such as solvents, carriers, surfactants, emulsifiers, or any other substance which are added for special purpose called "Special Additives".

**Pato Crop Care Co., Ltd.**

The company is the importer, formulator, and distributor of pesticide under Global logo Pato Crop Care.

The policies established the company is to help the core business, Pato Chemical Industry Plc to be more flexible . According to the Hazardous Substances Act (No.3) BE 2551 effective on February 25, 2008 has set a restriction on the number of trade name for 1 products registered to only 3 trade names which does not meet the demand of customers

Major Type of Imports are :

1. Technical Grade (TG) which is a concentrated chemicals which are used in formulations to produce final products according to the specified formulas.
2. Finished Product (FP)

Production plant is located in Bangpoo Industrial Estate. Pato Crop Care rents building and machinery of Building no. 5 and 6 of Pato Chemical Industry Plc. to use as office, formulating plant and warehouse. Annual capacity will be 16,500 Mts. for granule pesticide, 3,300 Mts. for liquid pesticide, and 1,650 Mts. for powder pesticide. Pato Crop Care submits documents for registration to the Department of Agriculture and as of December 31, 2013 Pato Crop Care has been granted with manufacturing and selling licenses for 15 trade names.

Vision

"Manufacturing high-quality products in reasonable price for Thai farmers while placing emphasis on operating results and simultaneously taking care of its social and environmental responsibilities"

1.2 Major Changes and Development

Pato went public and changed its name to PATO CHEMICAL INDUSTRY PUBLIC COMPANY LIMITED in October 1993 then continued to sell its ordinary stocks for 3,000,000 shares at Bt 55 per share, valued at Baht 10 per share in July 1995. PATO increased its capital to Baht 140 million and the company has been listed in the Stock Exchange of Thailand in August 1995.

In 2009 Resolution of shareholders' meeting approved share split from 10 baht per share to 1 baht per share. The ordinary shares of the company are then 140,000,000 shares.

In 2011 Investment in a new company "Pato Crop Care Co., Ltd." The registered capital is 5 million baht for 1 million ordinary shares with the par value of 5 baht per share.

Pato received SET Awards for Outstanding Company Performance 2011.



In 2012 Pato transferred ownership of the land and buildings at Minburi old factory to the buyer on January 12, 2012.

- At the extraordinary shareholder's meeting No.1/2012, the shareholders passed the resolution to allocate the ESOP warrants of 2,800,000 units to the executives and employees of the Company. Registered capital increased to 142.8 million baht with 140 million baht paid-up capital and 142.8 million shares to support the exercise of warrant in 2015

Pato has been awarded with its second consecutive year of SET Awards for Outstanding Company Performance 2012.

Major Changes and Development in 2013

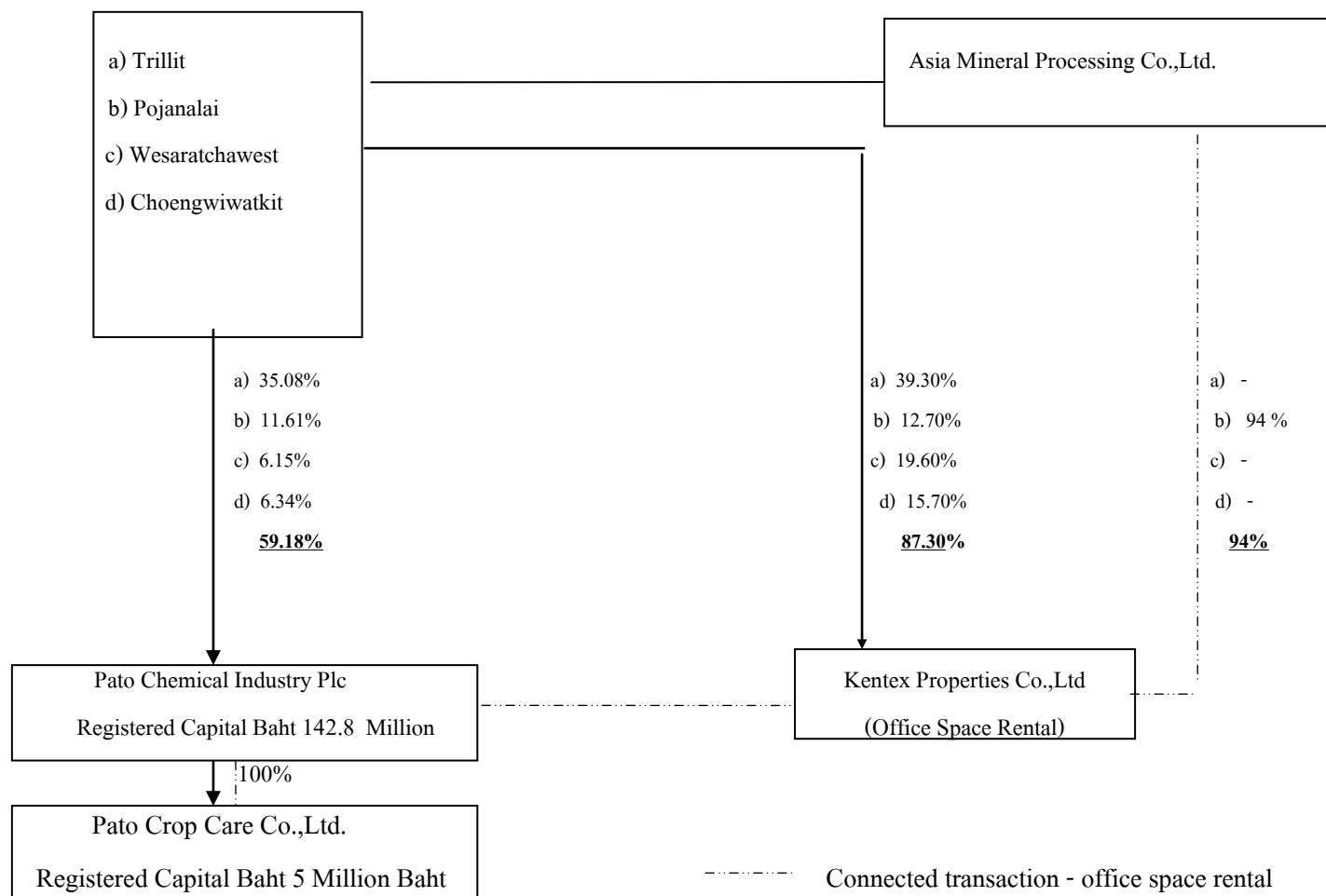
- January 2013 : Allocation of 2,800,000 units of warrant to Employees and Managements who are not the director of the company.
- April 2013 : AGM of Shareholders 1/2013 where the meeting appointed
: Mr. Pradit Rodloytook Registration No. 218 or Ms. Nongram Laoha-areedilok
Registration No. 4334 from AST Master Co., Ltd. to be the Company's auditor for 2013.
- May 2013 : Dividend payment for the 2012 performance at 0.60 baht per share.
- December 2013 : Pato Crop Care Co., Ltd. reported 2013 operational performance with 9.08 baht earning per share and paid 8.00 baht dividend per share to Pato Chemical Ind. Plc.
Total dividend is 8.00 million baht.
- February 2014 : The company has received approval from DOA for import registrations of 49 products under manufacturing and selling licenses of 98 trade names, while Pato Crop Care has 15 trade names.

**Development of major shareholders from 31 December 2010 – 20 March 2014**

Shareholders	Nationality	Number of Share As of 30/12/10	Percentage	Number of Share As of 30/12/11	Percentage	Number of Share As of 30/12/12	Percentage	Number of Share As of 20/03/14	Percentage
1. Trillit Group	Thai	50,100,000	35.79	50,100,000	35.79	50,100,000	35.79	50,100,000	35.79
2. Pojanalai Group	Thai	16,516,300	11.80	16,500,00	11.79	16,500,00	11.79	16,590,000	11.85
3. Wesaratchawest Group	Thai	9,283,900	6.63	8,728,100	6.23	8,728,100	6.23	8,790,900	6.28
4. Cheongwiwatkit Group	Thai	9,128,850	6.52	9,118,050	6.51	9,118,050	6.51	9,063,850	6.47
5. Others		54,970,950	39.26	55,553,850	39.68	55,553,850	39.68	55,456,150	39.61
Total		14,000,000	100.00	140,000,000	100.00	140,000,000	100.00	140,000,000	100.00
Paid up Capital(Million baht)			140		140	140		140	
Registered Capital(Million baht)			140		140	142.8		142.8	
Par (baht)			1.00		1.00	1.00		1.00	



1.3 Shareholders' Structure



**2. Type of Business****Revenue Structure**

	Operated	Percentage Of Shares	2011		2012		2013	
			Mil Baht	%	Mil Baht	%	Mil Baht	%
Local Sales by Products	PATO	100% in PCC						
Product Line 1								
Insecticide		19.03	349.93	36.37	23.93	7.41	232.60	32.20
Herbicide		51.06	455.20	47.31	211.98	65.6	315.60	43.69
Fungicide		-	97.11	10.09	58.87	18.2	135.61	18.77
Acaricide		-	22.00	2.28	11.96	3.70	14.77	2.04
Other		-	37.99	3.95	16.41	5.08	23.79	3.29
Total Local Sale		70.09	962.23	100	323.15	100	722.37	100
Export Sales by Products	PATO							
Product Line 1								
Insecticide		-	-	-	-	-	-	-
Herbicide		-	-	-	-	-	-	-
Fungicide		-	-	-	-	-	-	-
Acaricide		-	-	-	-	-	-	-
Other		-	-	-	-	-	-	-
Total Export sales		-	-	-	-	-	-	-
Local & Export Sales	PATO	100% in PCC						
Product Line 1								
Insecticide		19.03	349.93	36.37	23.93	7.41	232.60	32.20
Herbicide		51.06	455.20	47.31	211.98	65.6	315.60	43.69
Fungicide		-	97.11	10.09	58.87	18.2	135.61	18.77
Acaricide		-	22.00	2.28	11.96	3.70	14.77	2.04
Other		-	37.99	3.95	16.41	5.08	23.79	3.29
Total Local & Export sales		70.09	962.23	100	323.15	100	722.37	100
Less returned & Discount		0.52	7.31	0.76	1.18	0.36	4.31	0.60
Net Sales		69.57	954.92	99.30	324.33	76.8	178.06	99.66
Contractor		-	-	-	-	-	-	-
Other Income		0.03	6.72	0.70	97.76	23.1	2.47	0.34
Total Revenue		69.60	961.64	100	422.09	100	720.53	100



2.1 Product Characteristic

(1) In general, there are 2 major types of chemical pesticide (from business aspect)

1. Specialty product : this is proprietary product belonging to a particular company which has the patent right to produce and distribute it. It may also refer to a product that is exclusively imported by a national distributor/formulator. Such product has to go through phase-registration process required by the Ministry of Agriculture. Such process usually involves the submission and approval of complete toxicology data experimental trials which can take up to 3-5 year to complete.

2. Commodity product : this is generic product commonly sold and distributed by many companies. Commodity product can be imported from many manufacturers around the world. It is usually imported in the form of technical grade and then formulated into finished products. Such product is fairly simple to register, requiring only authorization certificate from the manufacturer. Since there is no significant difference in the quality and price, brand loyalty and image are very important factors for commodity products.

Products by types

	Specialty Products	Commodity Products	Total
Technical Grade	5	15	20
Finished Products	8	16	24
Total	<u>13</u>	<u>31</u>	<u>44</u>
Total Value(Million Baht)	<u>464.37</u>	<u>258.22</u>	<u>722.59</u>

The proportion in terms of the value of imported specialty to commodity products in Thailand is 30:70. For Pato Chemical Industry Plc, this proportion is about 64 : 36 in 2013. Among all pesticide products used by Thai farmers, herbicides have the highest import volume followed by insecticides. In the past, most herbicide was imported in the form of finished products more than in form of technical grade and vice versa for insecticides. At present, however, the market situation has changed. More and more herbicides are now imported in the form of technical grade due to the increase demand and emphasis of farmers on herbicides. Farmers are now more conscious about weeds, which naturally grow along with the crops, and take away some of the essential water and nutrition leaving a lowered crop yield. Herbicide usage is now more frequent and consequently the total herbicide usage grew.

From the manufacturers' aspect, herbicide can be produced and distributed in almost all season despite some uncooperative weather and climate condition. In severe poor weather condition, such as drought, herbicide sales are not affected as much compared to insecticide sales, which is considered more



risky. The reason for increasing imports of herbicide technical grade is because farmers demand the less expensive locally formulated herbicide in order to reduce their cost to cope with fluctuations in their crop prices. Since there is no significant quality difference between imported finished products and locally formulated ones, price is the main concern for farmers when they decide on purchases. On the other hand, in the production side, companies need to be concerned not only about the country's principal crops, but also the geographic suitability for different types of crop. Moreover, companies are concerned with the efficiency, productivity, and environmental impacts of their production facility. Sales breakdown by region as compared to total sales of the company during 2010 –2013 is as follows :

Proportion of sales breakdown by region

Region	2010	2011	2012	2013
Central	70%	52%	64%	67%
North	12%	24%	15%	18%
West	1%	1%	3%	2%
East	7%	12%	10%	7%
Northeast	8%	8%	6%	5%
South	2%	3%	2%	1%
Total	100%	100%	100%	100%

Typed of Pesticides Distributed in Thailand

1. Wettable Powder (WP), Water Dispersible Granule (WG) is the combination of active ingredients, carriers or diluents such as white clay, talc, or other substance, including surface active ingredients such as wetting agents, dispersing agents.

2. Emulsifiable Concentrate (EC) is the combination of active ingredients with non-water miscible solvents and emulsifier for water soluble which will also help the chemical to stick on the leaf or insect's body.

3. Soluble Liquid Concentrate (SL) will look like emulsion and are classified in the same type. This type of pesticide is the combination of active ingredients and water miscible solvent without emulsifier.

4. Suspension Concentrate (SC) or Flowable Formulation (FL) is the combination of well ground active ingredients and the carriers, e.g., white clay, and liquid inert ingredients. This F or For FL will be able to dissolve in water better than the water dispersible powder, thus, making it more convenient to use. Special additives could be added during the production process to make this pesticide more soluble.



5. **Water Soluble Powder (SP)** is the combination of water soluble active ingredients in powder, or fine flake, form mixed with surface active agents or other additives or solvents to make chemical well dispersed. It will dissolve in water instantly and with no precipitation.

6. **Dust (D)** is the combination of well ground active ingredients and inert ingredient will be the carrier to dilute for lower percentage of active ingredient. This type of pesticide can be sprayed with the knapsack sprayer.

7. **Granule (GR)**, is made up of carriers or other inert ingredients, such as sands, coated with active ingredients. This type of formulation is made for easy direct broadcast and soil burial.

There are many other types of pesticide in the market, but they are not so widely used, such as baits (B) in liquid or grain for instant use, ULV which is the combination of active ingredients oil-based solvent and with low viscosity and volatility to be used with ULV sprayer only.

Pato Chemical Industry Plc formulate pesticide in following form; Emulsifiable Concentrate (EC), Soluble Liquid Concentrate (SL), Water Soluble Powder (SP), Granule (GR), Dust (D).

Suspension Concentrate (SC) and Flowable Formulation (FL) cannot be produced locally but they are imported as finished products. Water Dispersible Powder can be produced locally but are quite expensive; they are usually imported as finished product.

Pato Chemical Industry Plc has the highest capacity of granule pesticide in the country with production capacity of 35,700 tons. In 2013, the company manufactured 10,664 tons of granule pesticide.

The percentage breakdown in terms of the company's import volume for the different types of agrochemical are as follows:

- Insecticide accounted for 40% of total import volume.
- Herbicide accounted for 50% of total import volume.
- Other pesticide such as Fungicide, Acaricide, Rodenticide, Molluscicide, and plant hormones accounted for 10% of total import volume. In 2013, sales contribution of those three types of products as Herbicide, Insecticide and other products were 44 % : 35% : 21% respectively.

**Proportion of Sales of Product Breakdown by Crop and Planting Area**

Crop	Area	Percentage
1.Rice	North, Central, North-East, South (some provinces)	74
2.Fruit	Central, East (Rayong, Chantaburi, Trad, Chacheongsao) North (Chiangmai, Chiangrai, kampangpet) South (Suratthani)	10
3.Vegetable	Central, North, and North-East	1
4.Field Crops such as Corn, Bean, Sugar Cane, Cotton and Tapioca	Central, South, North, and North-East	13
5.Oil Palm, Para Rubber	South , East, and North-East	2

Source : Marketing Department: Pato Chemical Industry Plc

2.2 Marketing and Competition**(A) Market strategy :**

The company's competitive advantages are

1. Standard quality of product which is well accepted by the customers for more than 30 years
2. Strategy to specify products for sale by each dealer : Aside from its financial status, the company will limit the products to be distributed by each dealer to prevent price cutting of the company's products among its dealers in the same area.
3. Price advantage as the company will produce from technical grade chemical.
4. Good relationship with dealers
5. Fast delivery : within the 200 kilometer radius the company will provide delivery. Dealers outside the radius, the company may deliver depending on order amount. Agrochemical industry pay much importance on prompt delivery. In each particular season, the company will have prompt delivery to meet the demand in time. For example, production and distribution of herbicide should be able to meet the demand during rainy season while insecticide should be able to be delivered promptly during the insects outbreak season.
6. Pato distributes totaling 80 various products , consequently the company will be able to share more market in more planting area for various crops such as rice, fruit, vegetable, para rubber, palm oil and



many others. This will reduce risk from natural disaster. Performance of the company will then be as we has expected for.

There are 3 main of distribution channels:

1. *Distributors* : They are mostly in Bangkok and distribute products under their own brand to dealers. They have Pato formulated, packed under distributors' registered label and brand.
2. *Local Repackers* : They are packaging companies who purchase the products from producer to repackage and distribute under their own brand. These companies will register the pesticide by themselves by getting the authorization certificate from the formulator/manufacturer.
3. *Dealers or Free Market* : They are small dealers or retailers in the upcountry and some in Bangkok who sell pesticides to the end users under Pato Globe Trade Mark.

Sales contribution for Distributors : Local Repackers : Dealers currently is 19 : 12 : 69

Types of Customers and its Relationships

In the pesticide industry, there are 2 main markets; general customers market (Free market) which is bigger, and markets for distributors and market for local repackers which is less important respectively. The company emphasizes in customers in rural area. By thorough selection of dealer for each particular area will sell different products to avoid competition. In doing so, the company will be able to sell variety of products and to reduce the risk of distributor's business. However, the company still needs to check its relationship with the customers to avoid any possible problems. The company aims to develop new products and variety, and, at the same time, aims to distribute the information on proper and efficient use of all pesticides to customers.

Criteria for selection of dealer for each are:

1. Financial status
2. Sales network and its coverage
3. No conflict agreement to sell the same product of different producers
4. Strong intention to commit to the company's products

**Product Distribution of Pato Chemical Industry Plc in 2010 - 2013**

Area	2010		2011		2012		2013	
	Number of Customers	Number of Customers	Number of Customers	Total Sale Thousand Baht	Number of Customers	Total Sale Thousand Baht	Number of Customers	Total Sale Thousand Baht
1. DISTRIBUTORS	25	196.34	25	214.43	13	70.93	7	138.62
2. LOCALREPACKERS	24	57.89	19	84.04	5	6.82	4	84.75
3. FREE MARKET	431	651.18	451	663.75	324	342.34	322	499.22
Total	480	905.41	495	962.22	342	324.09	333	722.59

Percentage of 10 major customers in 2010-2013

(Unit : %)

Customers	2010	2011	2012	2013
10 Major Customers	22.60	28.99	31.01	41.18
Others	77.40	71.01	68.99	58.82
Total	100.00	100.00	100.00	100.00

Note : There is no customer whose accounts of greater than 10%. Most customers are of long connection and of good payment. However, new customer is strictly selected to avoid bad debt.

Pricing Policy

In general, the company will set the price at the level, which is slightly higher than average price of its local competitors and slightly lower than average price of the international market, of the same product.

Other factors for the price consideration are:

1. If the product already exists in the market, the company will set its price within that product market price range.
2. If the product does not yet exist in the market, the company will conduct research on quality; the amount used and instruction for use to determine the efficacy of its product to determine the price in comparison with the pesticide farmers are currently using.

(B) Competition

There are 2 major types of chemical pesticide companies:

1. International Companies. These companies have their own products or buy few products from other companies. Most of them, either, imports finished products for repackaging by local repackers, or import technical grades for resell to local companies. There are about 11 international companies in Thailand.



2. Local Companies. There are 4 groups as follows :

2.1 Formulators and distributors : These companies have their own factory for formulating and reprocessing, and their own sales and promotion team. Most of them imports technical grade products. There are about 30 companies of this kind including PATO.

2.2 Formulators : These companies have their own factory for formulating and reprocessing, but do not have their own sales and promotion team. There are about 15 formulators in Thailand.

2.3 Distributors : These companies only have their own sales and promotion team. There are about 480 distributors in Thailand.

Currently, the company share 3.90% to total agrochemical market and has policy to gain more market share from the multinational or local companies in order to strengthen its competitiveness as follows:

1. **Compared with other formulators**, the company's factory in Bangpoo Industrial Estate is well equipped with modern machinery for higher capacity. Moreover, the company has sufficient trucks for quick delivery to serve customers better. In addition, many types of formulation such as Emulsifiable Concentrate (EC) Suspension Concentrate(SP), Wettable Powder(WP) and Granule (GR) are available.

2. **Compared with Formulators and Distributors**, the company's advantages are shown below :

- 2.1 Lower costs of production from the use of technical grade
- 2.2 Extensive marketing team with experience and expertise
- 2.3 Wider coverage of area all over the country
- 2.4 More product variety of various agrochemical types and uses

3. **Compared with Distributor**, the company's advantages over these companies are the same as those over the Formulator and Distributors. Moreover, the company has strategy to gain market share by:

3.1 Adding more products of comparable quality to those of the multi-national companies. With lower costs of production. It is expected that the company will be able to achieve more market share, initially, by 5-10% of total sales of such product, and will increase gradually.

3.2 Penetrating into new area i.e. area in the Northeast region, or in developing area of the country which is accounted for 60% of total area of Thailand. The company will send promotion team to the area to introduce the proper the quality of its produce to serve the demand in the market. By this way, farmers will also earn higher income.

To fulfill the special needs of the agricultural sector, the agricultural chemical industry must supply a wide range of products. These can be divided into four main categories: Herbicides, Insecticides,



Fungicides, Acaricides & Hormones. Diversification, therefore, is vital to the success and growth of the agricultural chemical industry. Other factors contributing to the success of the industry include:

1. *Range of products*

Production must include herbicide, insecticide, fungicide and acaricide and molluscicide, according to the market share ratio.

2. *Products*

Selection of products depends on the company's policy and the fluctuating price of crops.

3. *Market distribution*

Nationwide distribution is essential, as the type of crops grown varies from region to region. Regional productivity is also effected by rainfall, irrigation and even the demand for pesticide products.

4. *Rainfall*

The amount of land allotted to agricultural purposes has a direct impact on the growth of the agricultural chemical industry. The amount of rainfall also plays an important role in influencing the success, or otherwise, of land cultivation. If there is an abundant supply of rainwater, agricultural activities can be carried out throughout the country. Conversely, when rainfall is in short supply, land cultivation can only be done successfully in irrigated areas. Accordingly, during a drought, agricultural sector profits shrink drastically, and the overall economy is badly affected.

The demand for pesticides is also largely influenced by rainfall. When the water supply was good, the demand for herbicides grew to such an extent that a significant volume had to be imported, at great expense. However, when rain water was scarce, an insect epidemic occurred, resulting in large imports of concentrated insecticides, known as "Technical Grade", which had to be reformulated, before they could be sold on the domestic market.

5. *Price of crops*

As crop prices are so heavily influenced by importing opportunities and global prices, figures on each serve as indicators for industry trends.

**2.3 Production and Produce Procurement for Sale**

Pato Chemical Industry Plc's factory is located at 569 Soi 12, Bangpoo Industrial Estate, Sukhumvit Road, Tambon Praksa, Amphur Muang, Samutprakarn Province.

Capacity and Actual Production

Liquid Unit : Thousand Liters

Granule Unit : Ton

Powder Unit : Ton

Product	Capacity 2010	Actual 2010	Capacity 2011	Actual 2011	Capacity 2012	Actual 2012	Capacity 2013	Actual 2013
Insecticide								
- Liquid	2,612	711	2,612	838	2,612	35	2,612	317
- Granule	14,400	10,944	14,400	6,731	14,400	-	14,400	5,421
- Powder	1,500	41	1,500	61	1,500	-	1,500	-
Herbicide								
- Liquid	2,600	1,696	2,600	2,480	2,600	1,455	2,600	1,120
- Granule	19,800	4,625	19,800	7,643	19,800	-	19,800	5,243
- Powder	2,000	367	2,000	466	2,000	53	2,000	245
Fungicide								
- Liquid	500	229	500	335	500	66	500	268
- Granule	500	-	500	-	500	-	500	-
- Powder	500	54	500	74	500	10	500	100
Acaricide								
- Liquid	270	93	270	132	270	-	270	25
Others								
- Liquid	500	45	500	118	500	100	500	124
- Granule	1,000	343	1,000	276	1,000	-	1,000	-
- Powder	60	20	60	58	60	-	60	57
Total Capacity								
- Liquid	6,482	2,774	6,482	3,903	6,482	1,656	6,482	1,854
- Granule	35,700	15,912	35,700	14,650	35,700	-	35,700	10,664
- Powder	4,060	482	4,060	659	4,060	63	4,060	402

Note: The factory is working 1 shift for 7 hours.

**(A) Raw Material and Suppliers**

Major raw material is chemical of technical grade. Normally, the company will buy active vs inert ingredients at the ratio of 90 : 10 respectively by direct order from abroad and via local agent. Table showing types, suppliers and price. There is no substitute substance for technical grade chemical, However, there are substitutions for other inert ingredients such as emulsifiers, solvent, auxiliary materials for solvent, but these substitute substance will have to pass laboratory test before use. There are many suppliers of raw materials for those imported and purchased locally. Diverse group of raw material suppliers will create bargaining power for the company to set a more reasonable price, higher quality products, and prompt delivery. However, there are certain substances that the company buys from a sole supplier under special condition to benefit the company such as no sale to other company of the same productions. Price of raw material depends on the world price which is the same as other commodity.

There is no supplier whose business accounts for more than 30% of the company's total raw material purchase. Most of the raw material can be bought from many sources. However, the company may buy a material solely from a supplier under special condition such as quality, price or delivery, etc.

Local Purchasing Ratio of 2010-2013

Value of Purchasing Ratio (Unit : Thousand Baht)

Raw Material	2010	%	2011	%	2012	%	2013	%
1.Technical Grade	124,447	22.68	9,324	2.16	4,068	1.98	4,978	1.12
2.Solvent	18,497	3.37	31,064	7.20	3,238	1.57	10,474	2.36
3.Emulsifiers	9,454	1.72	12,432	2.88	776	0.38	10,507	2.37
4.Auxiliary	18,114	3.30	15,331	3.55	-	-	10,177	2.30
5.Others	15,544	2.83	13,454	3.12	483	0.23	13,443	3.04
Total Amount	186,056	33.90	81,605	18.92	8,565	4.16	49,579	11.19

**Import Purchasing Ratio of 2010 - 2013**

Value of Purchasing Ratio (Unit : Thousand Baht)

Raw Material	2010	%	2011	%	2012	%	2013	%
1.Technical Grade	339,822	61.93	328,274	76.09	177,449	86.27	379,310	85.66
2.Solvent	-	-	-	-	-	-	-	-
3.Emulsifiers	21,592	3.94	21,364	4.95	19,683	9.57	13,940	3.15
4.Auxiliary	179	0.03	172	0.04	-	-	-	-
5.Others	1,102	0.20	-	-	-	-	-	-
Total Amount	362,695	66.10	349,810	81.08	197,132	95.84	393,250	88.81

Local and Import Purchasing Ratio of 2010-2013

Value of Purchasing Ratio (Unit : Thousand Baht)

Raw Material	2010	%	2011	%	2012	%	2013	%
1.Technical Grade	464,269	84.61	337,598	78.25	181,517	88.25	384,288	86.78
2.Solvent	18,497	3.37	31,064	7.20	3,238	1.57	10,474	2.36
3.Emulsifiers	31,046	5.66	33,796	7.83	20,459	9.95	24,447	5.52
4.Auxiliary	18,293	3.33	15,503	3.59	-	-	10,177	2.30
5.Others	16,646	3.03	13,454	3.12	483	0.23	13,403	3.04
Total Amount	548,751	100	431,415	100	205,697	100	442,829	100

(B) Environmental Impact from manufacturing process and the demolishing of waste**- Procedure to reduce environmental impact**

The factory situates in Bangpoo Industrial Estate, Pato strictly complies with rules and regulations prescribed by the Industrial Estate regarding environment and others.

Being a formulator, there is no waste from raw materials or from formulating process. The only wastes are from some contaminated packaging materials which Pato hires a professional licensed waste management service to handle the collection for recycling or demolishing process.

- Legal Case against Environmental Misconduct

PATO has never been sued against environmental misconduct.



2.4 Non-Delivery Goods

There is no non-delivery goods as of 31 December 2013 for PATO.

3. Risk Factors

Business Risk

1. Natural phenomena risk, such as soil and weather conditions, which vary from year to year, not only directly effect agricultural activities, but also have a huge impact on the sales of insecticides. Drought is a major hindrance of the cultivation of high quality crops, and it reduces the volume of produce considerably, as well as the demand for insecticides. Conversely, when there has been major crop damage, the demand for insecticides could increase to such an extent that manufacturers are unable to meet the increased demand.

In recognition of such risks, therefore, PATO Chemical Industry Plc. has gone to great lengths to research and develop new products, in an effort to minimize the variations in the demand for insecticides caused by such natural crises. For example, in the case of drought, the use of liquid weed killers, instead of granules, goes a long way in reducing the impact on PATO Chemical Industry's sales. In addition, the company's new range of insecticides, designed for use with a wide range of crops, such as rice, field crops, orchards, para rubber, and oil palm, helps minimize the effect of such natural crisis on these crops.

2. Marketing and production risk has hardly had any impact at all for the Company. Its extensive nationwide network of agents means that this risk is negligible. Furthermore, its distribution strategy, which enables each distributor to sell only one product range to avoid competition among distributors, has proved most successful. But it is the company's reputation, amongst farmers, for manufacturing products which are both reliable and of a high quality that has contributed most to the company's success. The fact that its product prices are considerably lower than those of imported products also helps keep the company on solid ground.

3. Technology risk, as manufacturing processes use only a very limited amount of advanced technology. In the absence of any technological advantages, therefore, expertise and specialized production techniques are emphasized, to give PATO Chemical Industry the edge over its competitors. Whatever the processes, import, research and development, production or distribution, it has to be authorized by the Agricultural Department as well as any other relevant government offices, to ensure that all products meet required specifications, and are safe. They must not have any adverse effects on the environment.



4. Credit risk, the company is exposed to credit risk primarily with respect to trade and notes accounts receivables. The company's prudent credit policy and its diversified customers. The maximum credit risk exposure is equal to the book value of accounts receivable in the balance sheet. To minimize the risk of accumulating bad debts, PATO Chemical Industry has implemented a number of measures, including:

- 4.1 Control of credit balance
- 4.2 Strict consideration when opening new market
- 4.3 Shortening of payment period
- 4.4 Emphasis on crops with high potential and price, eg. rice
- 4.5 Reduction of granting credit to high-risk crops, eg. sugar cane
- 4.6 More detailed market studies by marketing personnel

5. Foreign currency risk relates from import activities of the company. The company primarily closely monitor movements of foreign exchange market and primarily of utilizes monetary instruments to manage risks.

6. Risk factors concerning the Hazardous Substance Act (No. 3) B.E. 2551 given on February 25, 2008, the revision of the previous Hazardous Substance Act B.E 2535 in order to put agrochemicals under rigid control in every single step from registration, import, and sale. The Companies has been applying for the registrations and licenses for many products. The Department of Agriculture (DOA) has gradually approved some of them of applications submitted. As of December 31, 2013, import registrations have been approved for 47 products and manufacturing and selling licenses have been approved for 92 trade names. Pato Cropcare Co.,Ltd. has been granted with 15 manufacturing and selling licenses as of 31 December 2013.

Shareholders Risk

Pato Chemical Industry Public Company Limited and its subsidiary realize of the stability of the shareholders and then set a commitment to run the business with a good performance as possible. The companies expect to pay dividend to shareholders not less than 40% of net profit each year. Shareholders will be able to consider history of dividend payout ratio from table under topic of Dividend Payment Policy.

From the previous disclosure of ESOP scheme, in the event of the exercise of all warrants are recalled for 2,800,000 units, price dilution will decrease by 0.0045% on the basis that the market price is 10.99 per share (Calculated from the weighted average 10 business days before the Board of Directors' meeting (September 14, 2012) and the exercise price per share is 8.20 baht.



4. Assets

4.1 Land, Buildings and Machinery

Assets of Pato as of December 31, 2013 are as follows :

Pato Chemical Industry Plc.

Location	Ownership	Book Value (Baht)	Collateral
1.1 Bangpoo Industrial Estate, Praksa, Samutprakarn 12-0-72 Rai	Owner	4,600,000.00	None
1.2 Bang Plee, Samutprakarn 1-2-57 Rai	Owner	2,430,252.00	None
1.3 Head Office	30 Years Rent	-	None
1.4 Buildings at Bangpoo Industrial Estate	Owner	7,630,015.00	None
1.5 Machinery at Bangpoo Industrial Estate	Owner	2,964,327.74	None

4.2 Right

1. BOI Pato has never applied for a privilege from BOI.

2. Other Rights

Right, belonging to Pato Chemical Industry, is intangible assets and requires 3-5 years of extensive research and laboratory tests of pesticides and insecticides. Pato has registered with the Ministry of Agriculture and Cooperatives for the owner of trademark for agrochemical. The registration is valid for six years from the date of receipt of registration and subject to renew once expire.

As of December 31, 2013, the company has received approval for import registrations of 47 products under manufacturing and selling licenses of 92 trade names.

**Pato Crop Care Co., Ltd.**

Location	Ownership	Book Value (Baht)	Collateral
1.1 Buildings at Bangpoo Industrial Estate	Rent from PATO	-	None
1.2 Machinery at Bangpoo Industrial Estate	Rent from PATO	-	None

Right

1. BOI Pato Crop Care Co.,Ltd. has never applied for a privilege from BOI.

2. Other Rights

Right, belonging to Pato Crop Care Co.,Ltd., is intangible assets and requires years of extensive research and laboratory tests of pesticides and insecticides. Pato has registered with the Ministry of Agriculture and Cooperatives for the owner of trademark for agrochemical. The registration is valid for 6 years from the date of receipt of registration and subject to renew once expire.

As of December 31, 2013, the company has received approval for manufacturing and selling licenses of 15 trade names.

5. Legal Dispute

None



6. General Information

Pato Chemical Industry Public Co.,Ltd

Pato Chemical Industry Public Co.,Ltd. (PATO) is the manufacturer and distributor of Agrochemical products.

Company Registration No. 0107536001214

Head office: Pato Building 3388 New Petchburi Road, Bangkapi, Huaykwang, Bangkok 10310.

Tel : 02 318 5612-19, 02 318 0360-9 Fax : 02 318 0367

Email Address : pato1@cscoms.com , pato2@cscoms.com, and mailbox@patochemical.com

Independent Directors : auditcom.pato@gmail.com

Factory : 569 Bangpoo Industrial Estate, Soi 12 Patana 3 Road, Praksa Sub-district, Muang District, Samutprakarn Tel : 02 324 0890 — 1 Fax : 02 324 0187

Website for Shareholders : www.patochemical.com

Registered capital 142.8 million baht

Paid up Capital 140 million baht

Total share 142.8 million shares.

Par value 1 baht per share.

Companies of which Pato hold share greater than 10%

Name : Pato Crop Care Co.,Ltd.

Office and Factory : 569/1 Bangpoo Industrial Estate, Soi 12 Patana 3 Road, Praksa Sub-district, Muang District, Samutprakarn

Company Registration No. 0115554017320

Tel : 02 324 0890 — 1

Fax : 02 324 0187

Type of Business : Manufacturer and distributor of Agrochemical products.

Registered and paid capital : 5 million baht of total 1 million shares. Par value 5 baht per share.

Pato's stake in Pato Crop Care 100 %



Other References

Registrar : Thailand Securities Depository Co.,Ltd.

Auditor : Mr. Pradit Rodroytook Registration No. 218 or
Ms. Nongram Laoha-Areedilok Registration No 4334
AST Master Co.,Ltd.

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