

Indian Agrochemical Industry

Introduction.....

India is the fourth largest producer of agrochemicals globally, after United States, Japan and China. The agrochemicals industry is a significant industry for the Indian economy. The Indian agrochemicals market grew at a rate of 11% from USD 1.22 billion in FY08 to an estimated USD 1.36 billion in FY09. India's agrochemicals consumption is one of the lowest in the world with per hectare consumption of just 0.58 Kg compared to US (4.5 Kg/ha) and Japan (11 Kg/ha). In India, paddy accounts for the maximum share of pesticide consumption, around 28%, followed by cotton (20%). Indian population is increasing and the per capita size of land decreasing, the use of pesticides in India has to improve further. Besides increasing in domestic consumption, the exports by the Indian Agrochemicals Industry can be doubled in the next four years if proper strategies and sophisticated technologies are adopted by the industry.

Industry Structure.....

In India, there are about 125 technical grade manufacturers (10 multinationals), 800 formulators, over 145,000 distributors. 60 technical grade pesticides are being manufactured indigenously. Technical grade manufacturers sell high purity chemicals in bulk (generally in drums of 200-250 Kg) to formulators. Formulators, in turn, prepare formulations by adding inert carriers, solvents, surface active agents, deodorants etc. These formulations are packed for retail sale and bought by the farmers.

The Indian agrochemicals market is characterized by low capacity utilization. The total installed capacity in FY09 was 146,000 tons and total production was 85,000 tons leading to a low capacity utilization of 58%. The industry suffers from high inventory (owing to seasonal & irregular demand on account of monsoons) and long credit periods to farmers, thus making operations 'working capital' intensive.

India due to its inherent strength of low-cost manufacturing and qualified low-cost manpower is a net exporter of pesticides to countries such as USA and some European & African countries. Exports formed ~50% of total industry turnover in FY08 and have achieved a Compounded Annual Growth Rate (CAGR) of 29% from FY04 to FY08.

Key Segments.....

Insecticides: Insecticides are used to ward off or kill insects. Consumption of insecticides for cotton has come down to 50% from 63% of total volume after introduction of BT cotton.

Fungicides: Fungicides are used to control disease attacks on crops. The growing horticulture market in India owing to the government support has given a boost to fungicide usage. The market share of fungicides has increased from 16% in 2004 to 20% in 2009.

Herbicides: Herbicides are the fastest growing segment of agrochemicals. Their main competition is cheap labor which is employed to manually pull out weeds. Sales are seasonal, owing to the fact that weeds flourish in damp, warm weather and die in cold spells.

Bio-pesticides: Bio-pesticides are pesticides derived from natural substances like animals, plants, bacteria and certain minerals. Currently a small segment, bio-pesticides market is expected to grow in the future owing to government support and increasing awareness about use of non-toxic, environment friendly pesticides.

Others: Plant growth regulators, Nematocides, Rodenticides, Fumigants etc. Rodenticides and plant growth regulators are the stars of this segment.

Competitive Landscape.....

The Indian agrochemicals market is highly fragmented in nature with over 800 formulators. The competition is fierce with large number of organized sector players and significant share of spurious pesticides. The market has been witnessing mergers and acquisitions with large players buying out small manufacturers.

Key market participants include United Phosphorus Ltd, Bayer Cropscience Ltd, Rallis India Ltd, Gharda Chemicals Ltd, Syngenta India Ltd, BASF India Ltd, etc. Top ten companies control almost 80% of the market share. The market share of large players depends primarily on product portfolio and introduction of new molecules. Strategic alliances with competitors are common to reduce risks and serve a wider customer base.

Key Trends.....

Market Trends:

- Focus on developing environmentally safe pesticides by the industry as well as the Government. The Department of Chemicals has initiated a nationwide programme for “Development and production of neem products as Environment Friendly Pesticides” with financial assistance from United Nations Development Programme (UNDP).

- Focus by larger companies on brand building by conducting awareness camps for farmers and providing complete solutions.
- Increase in strategic alliances among large players for greater market reach and acquisitions of smaller companies globally to diversify product portfolio. For example: Rallis has a marketing alliance for key products with FMC, Dupont, Syngenta, Bayer and Nihon Nohayaku. In addition, UPL has had a series of small acquisitions globally to enter new geographies and gain product expertise.

Technology Trends:

- Increased R&D expected for development of new molecules and low dosage, high potency molecules
- Focus on R&D in bio-pesticides segment with increasing preference for environmentally safe products in the market

Growth Forecast & Drivers.....

Since the Indian agricultural sector is highly dependent on monsoons, the market for agrochemicals is expected to grow at a conservative growth rate of 7.5% to reach ~ USD 1.95 Bn by FY14. Key market drivers include:

- 1. Growth in demand for food grains:** India has 16% of the world's population and less than 2% of the total landmass. Increasing population and high emphasis on achieving food grain self-sufficiency as highlighted in the FY10 budget, is expected to drive growth.
- 2. Limited farmland availability and growing exports:** India has ~190 Mn hectares of gross cultivated area and the scope for bringing new areas under cultivation is severely limited. Available arable land per capita has been reducing globally and is expected to reduce further. The pressure is therefore to increase yield per hectare which can be achieved through increased usage of agrochemicals. Indian agrochemical exports accounted for ~50% of total industry size in 2009.
- 3. Growth of horticulture & floriculture:** Buoyed by 50% growth experienced by Indian floriculture industry in last 3 years, Government of India has launched a national horticulture mission to double production by 2012. Growing horticulture and floriculture industries will result in increasing demand for agrochemicals, especially fungicides.
- 4. Increasing awareness:** As per Government of India estimates, total value of crops lost due to non-use of pesticides is around USD 17 Bn every year. Companies are

increasingly training farmers regarding the right use of agrochemicals in terms of quantity to be used, the right application methodology and appropriate chemicals to be used for identified pest problems. With increasing awareness, the use of agrochemicals is expected to increase.

Key Challenges.....

- 1. High R&D costs:** R&D to develop a new agrochemical molecule takes an average of 9 years and ~ USD 180 Mn. Indian companies typically have not focused on developing newer molecules and will face challenges in building these capabilities, while continuing to remain cost competitive.
- 2. Threat from Genetically Modified (GM) seeds:** Genetically modified seeds possess self-immunity towards natural adversaries which have the potential to negatively impact the business of agrochemicals.
- 3. Need for efficient distribution systems:** Since, the number of end users is large and widespread, effective distribution via retailers is essential to ensure product availability. Lately, companies have been directly dealing with retailers by cutting the distributor from the value chain thereby reducing distribution costs, educating retailers on product usage and offering competitive prices to farmers.
- 4. Support for Integrated Pest Management (IPM) & rising demand for organic farming:** Promotion of IPM, zero budget farming and usage of bio-pesticides by Indian Government and NGOs is gaining momentum. With increasing demand for organic food, farmers in certain states like Karnataka have reduced chemical usage and have adopted organic farming. Agrochemical companies will have to tackle the rising environmental awareness and address concerns on negative impact of pesticide usage.
- 5. Counterfeit Products:** The spurious pesticides market size in India is estimated to be USD 233 Mn in 2009. This negatively impacts the revenues of the organized sector.

Key Opportunities.....

- 1. Scope for increase in usage:** With ~35-40% of the total farmland under crop protection, there is a significant unserved market to tap into. By educating farmers and conducting special training programmes regarding the need to use agrochemicals, Indian companies can hope to increase pesticide consumption.
- 2. Huge export potential:** The excess production capacity is a perfect opportunity to increase exports by utilizing India's low cost producer status.

- 3. Patent expiry:** Between 2009 and 2014 many molecules are likely to go off patent throwing the market open for generic players. The total viable opportunity through patent expiry is estimated at over USD 3 Bn.

- 4. Product portfolio expansion:** Threats like genetically modified seeds, Integrated Pest Management, organic farming etc. can be turned into opportunities if the industry re-orientes itself to better address the needs of its consumers and broadens its product offering to include a range of agri-inputs instead of only agrochemicals.
