

Rating Methodology – Pesticides & Agrochemicals

[Issued in December 2022]

Background

India is predominantly an agrarian economy and most of its regions are dependent upon monsoons for irrigation. On an average, pests and diseases eat away around 20%-25% of the total food produced in India. Overall, food crops compete with around 30,000 species of weeds, 3,000 species of nematodes and 10,000 species of plant-eating insects. Hence, agrochemicals play a significant role in enhancing agricultural productivity. They help reduce crop losses and thereby increase food safety and revenues for farmers. The prospects for domestic agrochemicals industry depends on multitude of factors like monsoons, crop yield, incidence of pest attack, etc.

Agrochemicals can be grouped into the following categories according to the types of pests which they control and it includes (i) insecticides (ii) herbicides (iii) rodenticides (iv) fungicides (v) others including bio-pesticides.

Bulk of the consumption in the domestic market is of insecticides followed by fungicides and herbicides, unlike, high herbicides and fungicides usage globally. Maharashtra is the leading consumer of pesticides in India. Eight states including Maharashtra, Uttar Pradesh, Telangana, Haryana, West Bengal, Andhra Pradesh, Rajasthan and Karnataka account for majority usage of pesticides in India.

Agrochemicals can be manufactured and sold mainly in two forms- Technical and Formulations. Technical is the first stage of manufacturing where the chemical is concentrated and unsuitable for direct use. This is then processed with other materials known as formulants to develop the finished pesticide, known as formulation.

Rating Methodology

CARE Ratings has a detailed methodology for rating of companies belonging to the manufacturing sector. CARE Ratings' rating process begins with an evaluation of the economy/industry in which the company operates, followed by an assessment of business risk factors specific to the company. This is followed by an assessment of financial and project-related risk factors as well as the quality of the management. This methodology is followed while analyzing all industries that come under the purview of the manufacturing sector. However, considering the size and diversity of the manufacturing sector, CARE Ratings has developed methodologies specific to various industries within the sector. These methodologies attempt to bring out factors, over and above those mentioned in the broad ['manufacturing sector methodology'](#).

Following are such additional analytical factors considered by CARE Ratings while arriving at ratings in the pesticides and agrochemicals industry.

Business / Operational risks:

Product portfolio and diversification across business segments:

Insecticides accounted for the largest share of around 41% of agrochemical industry during FY22 followed by herbicides, fungicides and others that held a share of about 37%, 19% and 3%, respectively. In the five-year period (from FY18 to FY22), insecticides grew at a CAGR of 4.7% while fungicides grew at a faster CAGR of 13.2%, herbicides grew at a CAGR of 6.4% and others grew at a CAGR of 15.6%. Accordingly, companies having presence in all these agrochemicals is considered as well-placed compared to the companies having presence in only one of these agrochemicals. Also, due to growing pest resistance and newer pest attacks/diseases, it is essential for the

companies to introduce new products/molecules at regular intervals and provide newer solutions to crop problems. Companies having diversity across business segments enables them to better endure the segment-specific risks. Entities manufacturing only formulations may face inventory-related risks, and commoditisation of products, whereas entities manufacturing only technical may face risks related to small product portfolio and high capital requirement. Integrated entities may have better protection against such risks due to better control on supply of technical grade materials. Given the level of competition and nature of the market; diversified product range, the ability to manufacture products with complexity, degree of integration across business segments, presence in allied products and services significantly enhances the competitiveness of the company and are key credit strengths.

Market position and distribution network:

The market position and distribution network of an agrochemicals company affects its ability to generate stable cash flows. Agrochemicals companies having large market share, wide distribution setup and geographic spread in the domestic markets are at an advantageous position to withstand the uncertainties due to monsoons and regional seasonality. It also provides them a channel for intensive farmer contact for educating them on new products and their applications. Companies with wide distribution setup are also in a better position to take on competition.

R&D capabilities:

Due to slack patents and data protection, MNCs have been careful in introducing their successful molecules in India only after their patents have expired. Due to this, Indian agriculture has been deprived of the benefits of newer and more effective pesticides. With the onset of product patent in India, newer molecules have been launched and to withstand the competition, strong R&D capabilities and investments in R&D will be critical for Indian companies. Companies with strong R&D set up, manufacturing capability and proven ability for applied research are better placed in terms of tapping these opportunities. Investments in R&D, the R&D pipeline of new products and JVs/agreements with MNCs, etc., are critically analysed by CARE Ratings.

Product registrations/acquisitions:

As pesticides enter the food chain, Government of India (GoI) regulates their export, import, sale and usage. No pesticide is allowed for the production or import without registration. For exports, access to the markets is restricted through registration procedures stipulated by different countries. Registering pesticides generics in US / EU is a time-consuming process since it requires various types of studies to be carried out. The investments, both in terms of time and money, act as effective entry barriers. The companies with large number of product registrations and patents are therefore at an advantageous position. Custom Synthesis Manufacturing (CSM) has also evolved as one of the fast-growing segments wherein few Indian companies have experienced significant potential in the last few years due to China plus one policy adopted by global players. CARE Ratings views the ability of a company to obtain registrations in different countries as per their regulatory requirements and higher number of patents, product registrations and acquisitions in the global market as major strengths for sustainable growth.

Regulatory risk management:

Manufacture, import, registration, sale, transport, distribution and use of agrochemicals in India are regulated by the Insecticides Act, 1968 and Insecticides Rules, 1971. All agrochemicals (insecticides, fungicides, herbicides) must be registered with Insecticides Board & Registration committee (CIB & RC), Ministry of Agriculture under various sections of the Insecticides Act before they can be imported/manufactured for sale and distribution. Moreover, agrochemicals in India have mandatory labels to identify toxicity levels: red label - extremely toxic, yellow label - highly toxic, blue label – moderately toxic and green label – less toxic. Some of the products having high toxicity levels have been banned in India and in various developed markets, which implies that entities which are highly

dependent on red and yellow triangle run the risk of losing their source of revenue from products falling under banned category. The regulatory oversight for the sector remains high and therefore the evaluation of such companies on their ability to manage and mitigate such regulatory risks remains critical.

Brand building and product awareness measures:

As of now, the market for agrochemicals is low brand conscious and highly price sensitive. Due to dominance of generic products, there are several 'me too' and spurious products available in the market. In order to educate the Indian farmers and spread awareness about usage of quality pesticides, many large companies invested in brand awareness for their products by organizing campaigns, setting up service centres and extensive farmer contact. Such efforts also help the companies in understanding the needs of the farmers and developing better products. Brand building and product awareness measures undertaken by the companies help them in strengthening their market position and command higher margins.

Presence in export markets:

Exports from India are dominated by fungicides and herbicides segments while imports are majorly technical raw material. Increased export focus of the Indian pesticide industry is a consequence of seasonal demand, better price realization in the export markets, global outsourcing opportunity, low credit periods in export markets, domestic overcapacity and tax sops. Also, with the availability of low-cost high-quality scientist pool, India is emerging as a preferred destination for undertaking contract research. To increase their global reach, companies are increasingly focusing on forming partnerships/acquiring strong local players, who can provide support to register, launch and market products in their respective countries. While assessing pesticide companies, strong marketing footprint in various countries and partnerships with the local players in those countries is viewed favourably by CARE Ratings.

Raw material linkages:

India is one of the major producers for pesticide formulations, however, it still imports technicals to a large extent which serve as the base chemical for the end-product, viz, formulations. China is the world's largest producer of agrochemical raw materials, supplying 90% of the world's technical raw material requirements. India imports agrochemicals mainly from China, USA, Germany and Israel. However, some of the large domestic agrochemical entities have now invested in backward-integration which has reduced their dependence on imports and helped in enhancing their overall capability. CARE Ratings evaluates an entity's degree of backward integration, sources of raw material supply & its dependence upon imports, pricing arrangements, etc.

Working capital management:

The pesticide industry is working capital intensive. Due to the seasonal nature of the business and the uncertainties related to timing and coverage of monsoon, level of pest infestation, etc., the level of inventories needed by the companies to stock is large. Furthermore, the industry needs to offer long credit period to farmers due to intense competition and low offtake. Also, farmers tend to have little surplus money left for purchasing pesticides, as applying pesticides is the last leg in the agriculture operation. This leads to higher bad debts in events of crop failure or poor monsoon. Initiatives taken by the companies for working capital cycle management such as credit insurance cover on receivables, non-recourse factoring, efficient supply chain management, etc., are viewed favourably while assessing the credit risk profile of pesticide companies.

Financial Analysis

CARE Ratings follows the financial analysis for the [manufacturing sector](#) as per the criteria on [Financial Ratios-Non-Financial sector](#).

Environmental, social and governance (ESG) risk factors

CARE Ratings in its overall credit rating framework directly or indirectly analyses the critical ESG risks and their impact on the credit profile of the entities. CARE Ratings analyses the materiality of ESG risk factors and mitigating factors, if any, being implemented by the entity.

Agrochemical entities face major environmental-related risk on the back of highly toxic effluents generated during the manufacturing process. These entities are required to follow stringent pollution control norms set by the regulatory authorities w.r.to handling of various hazardous solid waste, wastewater and air emission. Any violation in compliance with pollution control norms or strengthening of these norms would adversely impact their operations. The entities which are gradually investing/ upgrading their infrastructure to reduce carbon footprint, air/ water pollution and hazardous waste as well as efficiently use the natural/scarce resources, are viewed favourably.

Agrochemicals are important from the 'Social' standpoint since it ensures food security for the large population, although there are obvious concerns attached w.r.to manufacturing process and rising usage of agrochemicals for higher yield. Adequate measures to ensure health and safety of the work force employed in agrochemical manufacturing is very important. High consumption of agrochemicals poses health-hazards for the consumers of final products which is resulting in partial shift towards organic farming to avoid adverse impact of agrochemicals. CARE Ratings looks at the composition of the board of directors and track record of legal and statutory compliance by its management/ directors to understand the corporate governance structure. Further, the quality of disclosure related to financial statements, related party transactions and transparency in sharing information with various stakeholders are also helpful to gauge the corporate governance practices.

Conclusion

The rating outcome is ultimately an assessment of the fundamentals and the probabilities of change in the fundamentals. CARE Ratings analyses each of the above factors and their linkages to arrive at the overall assessment of credit quality, by taking into account the industry's cyclical nature. While the methodology encompasses comprehensive technical, financial, commercial, economic and management analysis, credit rating is an overall assessment of all aspects of the issuer.

[For previous version please refer 'Rating Methodology – Pesticides & Agrochemicals' issued in [November 2020](#)]

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