

Asia-Pacific Crop protection chemicals market landscape

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As of 2024, the **Asia Pacific Crop Protection Chemicals Market** is estimated to be worth \$16.40 billion, and is projected to hit \$20.75 billion by 2029, registering a 4.81% CAGR during the forecast period (2024-2029). A share of 16.3% by value of the global crop protection chemicals market was held by Asia-Pacific in 2022.

The Asia-Pacific crop protection chemicals market was dominated by insecticides with 39.2% of the market share. In many countries across the region, rice is the most important crop. There are, however, various pests that have caused severe damage to the crop and, consequently, its yield. A further 34.6% of the value of the market was occupied by herbicides in 2022.

The region faces significant challenges due to horticultural crops, which impair agricultural productivity, due to a variety of weeds attacking staple crops and commercial crops. Fruit weeds cause substantial economic damage to the region because the fruit industry contributes significantly to its economic growth. There are two types of weeds most common to the regional fruit industry: *Amaranthus retroflexus* (Redroot pigweed) and *Echinochloa crus-galli* (Barnyard grass).

By value, Asia-Pacific held 16.2% of the global insecticide market in 2022. Pesticides play a critical role in the region and are constantly evolving. As a result, it contributes greatly to the promotion of productive and sustainable agricultural practices across a wide range of countries. Asia-Pacific's pesticide market experienced consistent growth over the historical period, with a CAGR of 3.2%.

In 2023-2027, Technavio estimates the global crop protection chemicals market will grow by \$25.12 billion. It is estimated that the market will grow at a CAGR of 3.54% during the forecast period. Herbicides such as glyphosates, Difenconazole,

Imidacloprids, and Bifenthrin are included in the crop protection chemicals market. Herbicides that are eco-friendly and decomposable are also developed with the help of biotechnology and microbiology.

A wide range of products are available to manage pests, diseases, weeds, and other threats to agricultural productivity in the Crop Protection Chemicals market. Insecticides, fungicides, herbicides, and bactericides are some of the chemicals in this category. Crop protection chemicals have a significant global market, with a number of companies operating in the sector.

Glyphosate, Difenoconazole, Imidacloprids, and Bifenthrin are a few of the products available in the Crop Protection Chemicals Market. APAC is experiencing significant growth, particularly in developing regions like APAC where the herbicide segment is thriving in cereals, oilseeds, rice cultivation, and other agricultural applications.

Invasive pests and emerging diseases pose significant challenges to the global agriculture industry, especially in APAC. A crucial role is played by crop protection chemicals in mitigating these threats. The safety and environmental impact of these solutions are ensured by stringent regulations and pesticide registration requirements.

Food preferences for staple foods such as cereals and grains, fruits and vegetables, oilseeds and pulses, drive the demand for chemical solutions. The market for cereals, oilseeds, and rice cultivation is driven by environmental benefits and regulatory pressures. Herbicide formulation technologies, nanotechnology, and encapsulation techniques are employed by agribusinesses to produce effective, low-emission herbicides. Trends in the market are influenced by consumer preferences for fruits, vegetables, and staple foods, while invasive pests and emerging diseases require continuous innovation.

Biologicals, biopesticides, and herbicides, including synthetic chemicals such as glyphosates, Difenoconazole, imidacloprids, and bifenthrin, are essential for maintaining crop yields. As a result of pesticide residues, malnutrition, and food insecurity, a balanced approach is needed. In addition to offering environmental benefits, innovations in biotechnology and microbiology contribute to reducing greenhouse gas emissions from tillage and herbicides. The market landscape continues to be dominated by small and medium-sized manufacturers and agricultural companies.

There are a number of **players in this field**, including DuPont, Syngenta, BASF, Bayer, and Corteva. Increasing agricultural productivity, rising food demand, and the need for sustainable farming practices drive the market. These chemicals pose challenges to the market, however, due to concerns about the environment and the development of pest-resistance. In order to remain competitive, market participants must focus on regulatory frameworks and research and development efforts. Crop protection chemicals also benefit from biotechnology and other innovative approaches.

As Asia-Pacific countries like China and India have a diverse agricultural landscape, some crops are more vulnerable to pests and diseases, leading to increased pesticide usage. Additionally, intensive farming practices and monocultures contribute to pest populations flourishing. A significant population means ensuring food security is a top priority, which leads to a greater need to protect crop yields and minimize pest losses, so pesticides become more prevalent.

In addition to the adoption of modern agricultural practices and the expansion of cultivated lands, the market is also experiencing growth because of the expansion of agriculture. A total of 662.2 million ha will be cultivated in the region by 2022, up from 624.5 million ha in 2019. In conjunction with the growth of agricultural activities, the demand for efficient pest control solutions is also on the rise.

In terms of value, Thailand is projected to exhibit the fastest growth rate in the region during the forecast period (2023-2029). Farmers in the country are expected to use more pesticides because of the rising threat of pests and increasing crop losses, which is contributing to this rapid growth.

By reducing pesticide use and greenhouse gas emissions, biotechnology and microbiology are driving innovation. The use of formulation technologies, such as nanotechnology and encapsulation techniques, can improve efficacy and reduce regulatory burdens for small manufacturers and agribusiness companies. Farming practices are being revolutionized by precision agriculture technologies, including GPS-guided equipment, drones, and sensors.

Stringent regulations and pesticide registration requirements require a focus on reducing the environmental impact and meeting consumer preferences for staple foods and luxury crops. Biopesticides and biologicals, as well as synthetic solutions, are becoming increasingly important in this context.