

GROWTH OF AGROCHEMICALS IN “AMRIT KAAL”

India's agro-chemical industry has come a long way in past 75 years and with right policy and enabling environment this sector holds promise for a flourishing future in next 25 years.

In the last five years, the crop protection market in India has grown at a CAGR of 6.3%, with the market growing to INR 24,570 crores in 2021 from INR 19,270 crores in 2017 and is expected to reach a level of INR 35,500 crores by 2027. Government of India has termed the next 25 years as the "Amrit Kaal". For the agro-chemical sector partnerships and imple-

mentation would be the key to realize its potential. There is need to engage with all stakeholders to ensure a predictable, science-based policy and regulatory regime for further enhancing the ability of the crop protection sector to make our farmers and Indian agriculture sustainable — to which CropLife India is committed.

Pursuit Towards Greener Chemistries

The crop protection industry has been contributing significantly to not only enhancing productivity but also to the sustainable growth of Indian agriculture. Agrochemicals have enabled India to tackle national crop emergencies like control of *Phalaris* minor weed in wheat, *Heliothis armigera* bollworm in cotton or brown plant hopper insect pest in rice over the years.

The R&D based crop protection indus-

try has been launching new molecules with increased efficacy and reduced application rates over time. The application rates, in the case of insecticides such as organophosphates (malathion, chlorpyrifos, etc) and carbamates (carbaryl, aldicarb, etc) during the 1960s and 1970s were as high as 1000–3,000 grams of active ingredient per hectare. By the 80s, with the advent of cartap and synthetic pyrethroids, the rates came down to 50-500 grams per hectare. From the 90s to the early 2000s, there was further advancement through moderate toxicity chemicals like triazoles and neonicotinoids, having dosages of 25-200 grams per hectare. Since the mid-2000s, the active ingredient application has fallen to well below 100 grams; in some cases — such as sulfonylureas and diamides — it is as less as 4 grams per hectare. The pursuit towards greener chemistries continues and the industry is well aware of its responsibility to reduce the environmental footprint.

Indian Agrochemical Sector

The notion that India consumes a lot of agrochemicals is another misconception around Crop protection industry. While the global average consumption of pesticides is 3 Kg/Ha., India consumes only 0.3 Kg/Ha. In contrast, China consumes 13.06 Kg/Ha., Japan 11.8 Kg/Ha., and Brazil 4.7 Kg/Ha. In fact, Indian agriculture productivity per hectare is very low because of unavailability of newer and better technology chemicals.

Another critical aspect is that while there are 1175 molecules available globally, only 318 are registered in India. A further breakdown reveals that only about 75 molecules and their combinations are being used to protect 140 million hectares of diverse Indian agricultural crops.

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The US, EU and Brazil have around 450-750 approved molecules. Even country like Vietnam has more than 500 registered molecules.

These statistics indicate the fact that our farmers have limited choice to fight against the ever-increasing host of pest and diseases. Therefore, it is imperative that the industry is provided an enabling environment to bring newer and greener chemistries for the benefit of the farmers.

Policy Initiatives for a Vibrant Indian Agrochemical Sector

There is a need for a predictable science-based policy and regulatory regime for building a robust manufacturing base in the country.

Registration Timelines – Internationally, time required to register products is much less as compared to India. There is an imminent need to look at the registration timelines and bring it in line with international norms without compromising on the safety and efficacy and sustainable aspects. All registration categories under section 9(3) for molecules to be introduced first time in the country should be given priority. New molecule introduction needs to be encouraged and facilitated. There is a need to adopt Global Best Practices

Minor Changes legislation - At present any minor changes to the recipe is like a new registration and leads to enormous delays. Internationally minor changes are

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allowed without the need for elaborate data requirements all over again. India should also allow minor changes without the requirement of large amount of data.

Upgradation of Labs - India should implement Organization for Economic Co-operation and Development (OECD) requirements in letter and spirit and encourage data generation under Good Laboratory Practice (GLP). Peer review on toxicological data should be adopted by India similar to the pattern adopted by OECD member countries. Government should avoid any hasty decision to ban or a policy environment restricting use and introduction of new molecules.

It also needs to ensure that there is adequate duration of protection of regulatory data for the first-time registrants. This will enable them to not only recoup some of their investments but also steward the product properly. A period of exclusivity is granted by countries across the world for first time registrants in accordance with the WTO and TRIPS guidelines. In fact, it would ensure "Innovation Protection" and

would encourage more discoveries in India leading to creating a robust manufacturing base.

It is pertinent to mention here, if farming was not already difficult, with crops having to compete with 30,000 species of weeds, 3,000 species of worms and 10,000 species of plant-eating insects the newer and more complex pests like Fall Army Worm (FAW) and locusts combined with climate change are threatening the very existence of farming. In addition, bugs, molds and rodents threaten farmers' post-harvest and the Crop Protection products are the only solution that can prolong the life of crops and prevent post-harvest losses.

With support of the central and state governments, focus on new technologies as well as an enabling environment, Crop protection industry will surely witness its Amrit Kaal.

