

# DEMYSTIFYING MYTHS ABOUT PESTICIDES USE IN INDIA

### Myth-Indian farmers use excessive Pesticides

**Reality-** India ranks 2nd in the world in agriculture production after China, but it ranks 12th in pesticide use. Most other countries including USA and those in the EU such as France, Spain, Italy, Germany etc., use more pesticides than India on per unit area and per unit of output basis. (source- FAOSTAT). Let it be known that India's crop protection chemicals consumption is one of the lowest in the world. It is a far less amount of crop protection chemicals compared to developed and even emerging economies.

Country	Pesticide used per ha
India	0.38 kg/ha
China	11.0 kg/ha
Japan	10.9 kg/ha
France / Germany	3.7 kg/ha
UK	2.8 kg/ha

(Source: Philips McDougall and World Bank Database)

India's expenditure on crop protection chemicals is USD 2.5bn only which is 0.8% of total agri production. However for every 2.5 USD we spend on crop protection chemicals, we produce 126 USD of food/crop; far higher than countries like the US, Japan & Brazil. During Farmers Training Program (FTP) they are educated on the need to follow the government recommendations as per "package of practice" on dosage, crop segment time of spray etc.

### Myth- Agriculture commodities in India carry high level pesticides residues

**Reality-** Annual studies under All India

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Network Project on Pesticide Residue show that on average only about 2.2% of the agri commodities show pesticide residues above Maximum Residual Limit (MRL). In other words, 98% of our agri commodities do not carry unacceptable levels of pesticide residue. This compares well with the data from other countries.

### Myth- Pesticides use has led to high cancer cases in India

**Reality-** Globally India ranks 172nd in cancer rates. Australia, New Zealand, Ireland, USA and Denmark are the top 5 that lead in cancer rates. Singapore with nil area under agriculture has more cancer rates than India. The largest incidence of cancer in India are in the states like Mizoram, Meghalaya, Sikkim etc., that hardly use pesticides in agriculture. Punjab ranks 24th among various states in each standardized cancer rates in India. (Source ICMR) Group I list of the WHO's International Agency for Research on Cancer (IARC) contains 120 substances considered to be carcinogenic to humans. Not a single agro-chemical figures in this list. This clearly

Pesticides use per 1bn US\$ agri. output			
Country	Agri. Output (bn US\$)	Total pesticides used per year (technical grade in tonnes)	Pesticides used per 1bn US\$ value of Agri. Output (technical grade in tonnes)
Brazil	83	377176	4544
USA	197	407779	2070
China	1020	1763000	1728
EU	251	367779	1465
Japan	52	52332	1006
India	479	61702	126
World	3515	4190985	1192

(Data accessed on 29th December 2021)

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proves that increased incidences of cancer cases are not linked to pesticides but are more a likely result of modern life style.

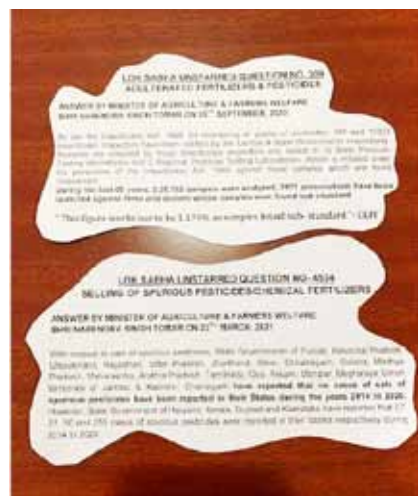
### Myth- Accidental exposure to pesticides spray drift affects farmers

**Reality-** Pesticides are sprayed in ground operations, diluted with water. The water content would be as high as 99% in the pesticides spray when applied to the crops. Accidental short exposures to such pesticides spray drift would not deliver lethal dose to the body of the spraying person. Of course, it is always recommended that such exposures are avoided by using PPE safety kits.

### Myth- Indian market is full of spurious pesticides.

**Reality-** On analyzing 3,38,182 samples drawn during the last 5 years by government, only 1.174% were found to be not meeting specification or were substandard. There were hardly any spurious samples as propagated by importing lobby.

Ministry of consumer affairs has been misrepresented on facts regarding their study on Awareness and problems of fake products. It was never a finding of their study that 58% of agri inputs available in rural market were found to be spurious, fake, illegal and counterfeits. In fact there is no such word as spurious



in the Insecticides Act 1968.

### Myth- India's water system, remain highly polluted with pesticides

**Reality-** Fish species are highly sensitive to water quality and toxic pollutants. India is the second largest fish producing country in the world. This shows that our water systems remains conducive to production of fish. Andhra Pradesh and Punjab despite being high users of Pesticides, are leaders in fish production. Andhra Pradesh & Punjab have the high-



est inland fish productivity at 6560 kg per acre of inland water area which is higher than in other states in India.

### Myth- Pesticides are the primary means to commit suicide.

**Reality-** In India, farmers suicide account for less than 7% of the total suicide in rural villages. Self hanging is the most common method for suicide in India. Sikkim that does not allow use of pesticide has suicide rates four times then in Punjab. (Source: NCRB) 93% of the suicides in the India are by non- farmers i.e, by people not engaged in agriculture. Suicides, whether by farmers or non- farmers deserved our equal empathy. Main reasons are drug abuse, illness, financial issues, bankruptcy but not pesticides as wrongly propagated.

### Myth- India uses pesticides that are banned in other countries

**Reality-** Use of pesticides in every country depends on local crops, climate, environment and occurrence of pests and diseases. Pesticides registration/ use therefore varies from one country to another and are granted after stringent field and laboratory trials, with strong element of sovereignty. The number of registered pesticide are:

Pesticides banned in India	Countries that still use them
Aldicarb	USA, China, Mexico, etc.
Carbaryl	USA, Canada, Brazil, Argentina, Mexico, Australia, Malaysia, etc
Diazinon	USA, Australia, New Zealand, Japan, China, Malaysia, Chile, etc.
DDVP	USA, Canada Australia, New Zealand, Mexico, Israel, Argentina, China, South Korea, Peru, Kenya, South-Africa, Tanzania etc.
Maleic- Hydrazide	USA, Canada, Brazil, Argentina, Mexico, Russian Federation, Japan, Australia, New Zealand, China, Netherlands, Germany, France, South Korea etc.
Tetradifon	Japan, South Korea, Columbia, South- Africa , Tanzania, etc.
Phorate	USA, Canada, Australia, China, South Korea, Taiwan etc.

(Source: www.homologa.com)



**Myth- Organic and bio-pesticides are safer than chemical pesticides**

**Reality-** All substance used as pesticides whether organic, bio or synthetic undergo the same toxicity, safety and efficacy assessments before allowed for commercial introduction. Stanford University, USA conducted study and found no evidence for differences in nutritional content for over 15 nutrients between conventional and organic produce. As per AINP, in vegetable samples (405

samples) collected from organic outlets across the country, as high as 12.3% among them had measurable crop protection chemical residues. (Source- All India Co-Ordinated Programme on Crop protection chemical, Residues, DAC, Delhi)

**Myth- Indian manufacturers are not able to manufacture quality meeting global standards**

**Reality-** Indian manufacturers produce quality which is in fact superior than imported products in terms of purity profile



and efficacy. Our members account for 80% of exports to 130 countries with acceptable quality. Today it has been proved that Indian scientists and engineers are equal to the best in the world and we are able to produce superior quality pesticides at competitive price. Though last year we exported US\$4.9 billion worth of pesticides, the world market of generic off patent pesticides is US\$55billion. If unnecessary rules and regulations are streamlined and ease of doing business is done, we can boost our export of pesticides to US\$40billion in the next 5 years.

**Myths- Introduction of neonicotinoid insecticides adversely affected honey production.**

**Reality-** The truth about the effect of pesticides on the honey production in India is to the contrary. Environmental experts across the world are up in arms against Neonicotinoids, which are a group of insecticides used widely in the farms for crop protection. They want to ban the use of Neonicotinoids, which in their opinion absorbed by plants and can be present in pollen and nectar, thus making them toxic to bees. If we go by the opinion of environmental experts, honey production in India should have hit rock bottom. India's honey production has been steadily on the rise. Honey production over the last three decades has grown steadfast in India from the first part of the 1990s (45,000MT) until last recorded in 2018-19(1,13,000)

**Myths- Pesticides applied for non agriculture/ house hold is safe**

**Reality-** Pesticides are applied at much higher concentration for non- agricultural pest control, when compared to the ones used against crop pests. Household pesticides are toxic pesticides similar to the ones sprayed on the field crop. Pesticides in the field used on various crop are in open environment whereas sprays and vaporizer used at home are in closed contained spaces.