

Pesticides importation trends for Belize (2014 – 2023)

Pesticide imports data is oftentimes used as a proxy for actual pesticide use. When compared with trends over time in crop production and areas planted, pesticide imports data could be used to analyze pesticide use intensity in crop-growing regions.

In Figure 1, a 10-year trend of total pesticide imports spanning from 2014 to 2023, is presented in kilograms of active ingredient. This includes pesticides used in agriculture and for public health (professional and household use).

Table 1 further classifies the 10-year imports data for the same period, for agricultural-use pesticides and other agricultural-use substances regulated by the Pesticides Control Board of Belize, by their use.

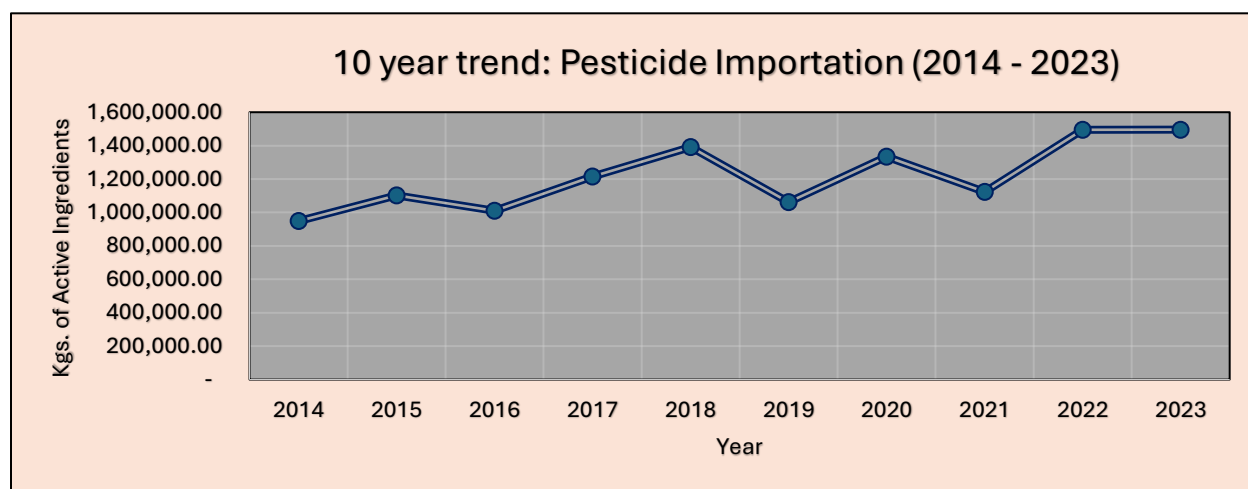


Figure 1

Data on pesticide importation - kilograms Active Ingredient.										
Classification by use	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Insecticides including Insect Growth Regulators	56,986.32	46,042.19	43,320.86	43,949.99	40,533.37	41,170.72	54,163.96	43,928.93	65,681.46	73,589.02
Fungicides	217,534.74	184,093.31	179,267.52	156,388.36	189,021.66	221,193.91	200,642.02	240,954.08	316,250.74	245,958.41
Agricultural Spray Oils	230,615.20	413,307.84	298,120.81	500,009.04	690,663.22	409,021.65	417,334.20	368,810.40	532,336.00	574,310.21
Herbicides	351,644.57	388,245.16	453,555.70	445,143.19	418,653.68	354,373.51	558,601.50	373,651.63	407,370.65	512,162.47
Adjuvants	61,747.93	48,593.00	17,655.03	56,331.08	22,533.47	25,242.21	97,007.92	90,717.04	162,419.69	79,813.66
Others including rodenticides, molluscicides, soil sterilants, plant growth regulators	2,728.63	1,012.83	1,969.54	1,518.48	18,185.57	3,562.16	210.05	468.85	247.86	496.62

Table 1

Pesticides importation trends for Belize (2014 – 2023)

Pesticides approved for use in Belize are classified as general-use or restricted-use pesticides. The average percentage of Restricted-Use Pesticides imported into the country between 2020 – 2023, stands at approximately 43%. (Table 2)

A restricted-use pesticide is defined as a pesticide which, if used in accordance with a widespread and commonly recognized practice, may generally cause, without additional regulatory action, unreasonable adverse effects on the environment, including the applicator and other people.

Importation of General-Use vs. Restricted-Use Pesticides			
Total Imports: Kgs. Active Ingredient			
	General-Use	Restricted-Use	% RUP
2020	765,631.86	569,061.66	42.63
2021	598,269.91	524,769.68	46.72
2022	900,081.20	593,364.21	39.73
2023	839,167.44	655,346.31	43.85

Table 2

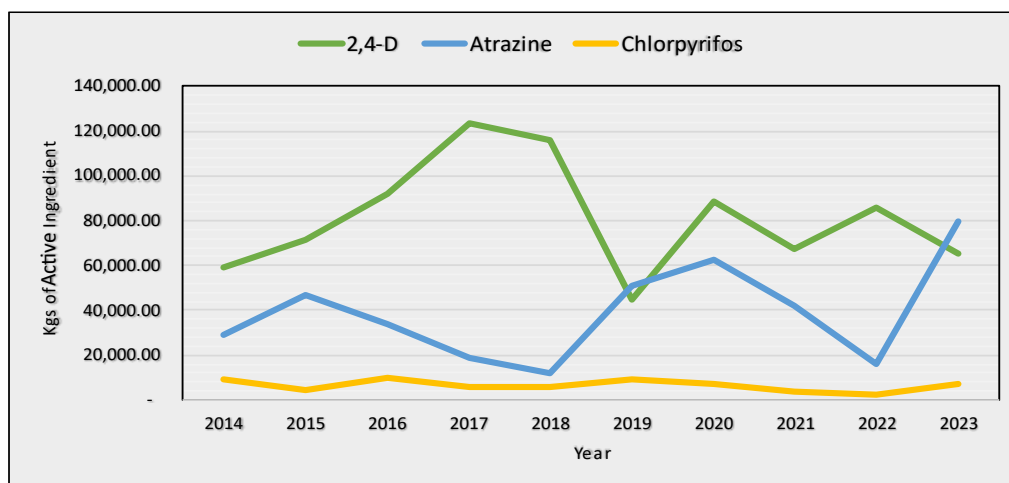


Figure 2

The chart in Figure 2. shows the ten-year trend in the importation of three restricted-use pesticides - herbicides: 2,4-D, atrazine, and insecticide: chlorpyrifos. The Pesticides Control Board has commenced the pilot of a mechanism for the periodic review of registered pesticides using these candidates, commencing with an assessment of remaining justifiable uses for pesticides of potential health and environmental concern. In April 2024, the Pesticides Control Board agreed by consensus that there were no remaining justifiable uses for the insecticide chlorpyrifos and that it would commence a plan for its phase-out and prohibition.



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Importation trends for commonly used herbicides of regulatory interest: paraquat and glyphosate. (Table 3, Figures 3, 4)

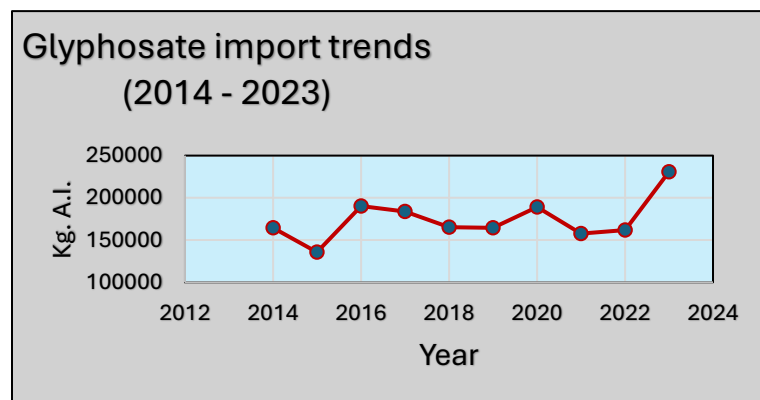


Figure 3

Importation data: Paraquat and Glyphosate (2014 to 2023)		
	Kgs. Active Ingredient	
Year	Paraquat	Glyphosate
2014	17,711.86	164,553.23
2015	23,506.40	135,770.95
2016	32,052.80	190,449.47
2017	34,326.40	183,963.17
2018	36,506.40	165,128.87
2019	21,175.60	164,600.71
2020	50,955.20	189,112.89
2021	37,429.60	157,826.63
2022	44,735.80	161,770.04
2023	43,793.80	230,880.25

Table 3

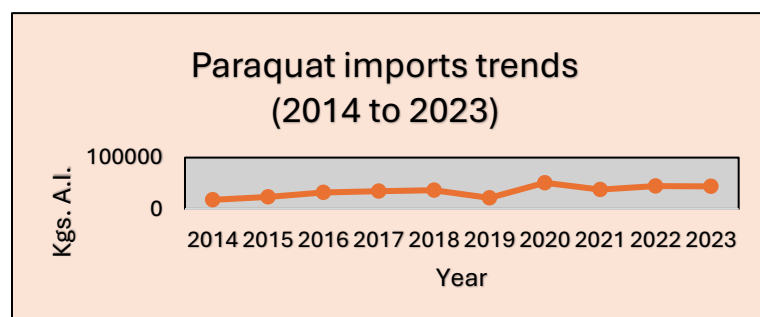


Figure 4

Except for the years 2019, 2021 and 2022 when mancozeb (fungicide) ranked highest in volumes imported (kgs. active ingredient), glyphosate has been the most imported pesticide in Belize during the ten-year period 2014 to 2023. (Table 4)

Top ten most imported pesticides 2021 to 2023 (Kgs. Active Ingredient)					
2023		2022		2021	
glyphosate	229,584.25	Mancozeb	266,238.12	Mancozeb	197,752.04
Mancozeb	213,766.60	glyphosate	161,770.04	glyphosate	157,826.63
atrazine	79,665.08	2,4-D	86,121.36	2, 4-D	67,495.10
2,4-D	65,520.39	paraquat	43,119.80	atrazine	41,957.86
diuron	45,716.00	diuron	29,120.00	paraquat	36,457.60
paraquat	37,193.80	ametryn	28,426.00	ametryn	26,000.00
sulphur	37,068.00	Malathion	26,204.00	Malathion	17,975.20
ametryn	21,110.00	sulphur	23,225.00	diuron	13,853.93
Malathion	10,760.00	atrazine	16,375.10	fenpropimorph	10,348.80
chlorpyrifos	7,160.60	pendimethalin	10,983.83	pendimethalin	6,421.35

Table 4

