Table 3: Growth in Global Sales of Neonicotinoid Pesticides[13,14,15]

Product	Application	Crop uses	Company	Global Sales (US $ millions)			
				2003	2005	2007	2009
imidacloprid	Seed treatment for soybeans; sprayed on tomatoes, leafy greens	140	Bayer CropScience	665	830	840	1,091
thiamethoxam	Seed treatment for corn and soybeans; applied to soil for other vegetables and fruits	115	Syngenta	215	359	455	627
clothianidin	Seed treatment for canola, corn, sugar beets; soil application for potatoes	40	Sumitomo/ Bayer CropScience	<30	162	365	439
acetamiprid	Sprayed on fruit and leafy vegetables	60	Nippon Soda	60	95	130	276
thiacloprid	Soil treatment or spray for cotton and fruit	50	Bayer CropScience	<30	55	80	112
dinotefuran	Soil treatment or sprayed on leafy greens, potatoes, cucumbers	35	Mitsui Chemicals	<30	40	60	79
nitenpyram	Oral medication for parasites on pets; soil treatment or spray for rice, fruit, vegetables, tea	12	Sumitomo	45	<10	<10	8

Table 2: Partial List of Key Studies Demonstrating the Impacts of Neonicotinoids and Other Pesticides on Pollinators[11]

Species	Authors/Date	Pesticides	Significance
Honey bee	Zhu, et al., 2014	Fluvalinate, coumaphos, chlorothalonil, chloropyrifos	Combination of the four most common pesticides found in pollen/wax synergize, increase bee larvae mortality.
	Doublet, et al., 2014	Thiacloprid	Sublethal doses of a neonicotinoid pesticide interact with parasite *Nosema cernae* and black queen cell virus to elevate honey bee mortality.
	Carillo, et al., 2014	Fipronil, imidacloprid	Learning, as evaluated through proboscis (e.g. mouthparts used for feeding) extension, is diminished.
	Di Prisco, et al., 2013	Clothianidin	Altered immune response allowed replication of viral pathogens in exposed bees.
	Williamson & Wright, 2013	Clothianidin, coumaphos	Long term memory, short-term memory, and odor differentiation all decrease.
	Palmer, et al., 2013	Imidacloprid, clothianidin, organophosphate miticides	Cognitive damage from exposure causes "epileptic type" hyperactivity with implications for survival.
	Matsumoto, 2013	Clothianidin, dinotefuran, etofenprox, fenitrothion	Demonstrates behavioral changes and declines in homing success.
	Derecka, et al., 2013	Imidacloprid	Metabolizing genes for honeybee larvae reduce at low levels of exposure.
	Hatjina, et al., 2013	Imidacloprid	Of the few physiological studies, this finds sublethal doses decrease phyopharyngeal glands and respiratory rhythm.
Africanized honey bees	Sandrock, et al., 2013	Thiamethoxam, clothianidin	Sublethal exposure to neonicotinoids is expressed in complex fitness related ways, including a 50% reduction in offspring.
Solitary bee	Bryden, et al., 2013	Imidacloprid	Chronic sublethal stress causes bee colony failure according to models.
Bumblebee	Gill, et al., 2012	Imidacloprid, lambda-cyhalothrin	Combination of two pesticides impairs foraging, increases worker mortality, and reduces colony success.
	Whitehorn, et al., 2012	Imidacloprid	Field realistic levels drastically reduce queen production and growth rates.
Wildlife	Goulson, 2013	Clothianidin, thiamethoxam, imidacloprid	Reviews the environmental risks of these chemicals to bees, birds, and beneficials.