



## Public Submission Chlorpyrifos - EPA

**Abstract:** The Colombian Banana Association -Augura acknowledges the opportunity given by the EPA of submitting its position towards the chlorpyrifos review process. This substance is a key tool for the effective management of insect pests that affect banana crops. The way chlorpyrifos is used in banana plantations follows a very targeted, concrete approach, which significantly reduces the risks associated with the substance and outperforms them with the benefits of maintaining quality and productivity in bananas. The lack of availability of this substance can severely impact banana production, as it is the most effective tool to keep quarantine pests caused by mealybugs under control. At the same time, a change in the import tolerances of chlorpyrifos for bananas could lead to an increase in costs and food waste, as well as disruptions in fruit availability in the US. We request the EPA to keep the tolerance levels for this fruit, and if any further regulatory action is considered, exclude the banana crop from such regulation. As bananas constitute an essential crop for the livelihood of millions of people working in the banana industry in Latin America, changes in the import tolerances for this active ingredient – as there is no proven effective alternative yet – can lead to major disruptions in the supply chain, production and hamper the development of several Latin American regions. Such restrictions, added to the global effects of the COVID-19 pandemic, could generate major economic and social losses in our country.



Considering the current review that the Environmental Protection Agency of the United States of America (EPA) is performing over the chlorpyrifos substance, the Colombian Banana Association -Augura would like the following considerations to be taken into account in the review process of the substance.

First, we would like to state that chlorpyrifos represents nowadays the most effective functional crop protection tool banana growers have at reach. As the document shared by the EPA on the "Proposed Interim Registration Review Decision on Chlorpyrifos" confirms, the total annual economic benefit in crop production that derives from the use of this substance is estimated to be \$19-130 million<sup>1</sup>. This is related to the fact that alternative insect pest control strategies have not yet proven effective while at the same time finding and testing them is proving even more difficult in the context of the pandemic. More concretely, there are 98 countries in the world that rely on chlorpyrifos in order to tackle different pests that affect up to 50 different crops worldwide. In those cases, the absence of chlorpyrifos can imply more health-related risks, since the alternatives prove to be worse for human health, as well as an increase in economic costs. Therefore, subsequent changes in the chlorpyrifos tolerance expressions for said crops could imply disastrous consequences for banana growers and their plantations.

Bananas constitute one of the crops in which no effective replacement for the chlorpyrifos substance has yet been found. Complementary insecticides have been introduced in order to keep insects and bugs under control, which have allowed for a reduction of the use of chlorpyrifos in banana crops. Nevertheless, such complementary ingredients should not be considered as substitutes, but rather as effective tools in the fight against specific pests in specific periods of the year. Thus, the banana and plantain sectors in Latin America have repeatedly called attention to the lack of proven alternatives to this substance that are available in their countries for immediate use, although they are constantly exploring and analyzing new substances to use them as a replacement. However, the search has not yet shown very promising results. Whereas alternative substances have proven an effectivity of barely 60%, chlorpyrifos keeps being the most reliable tool in the fight against insects and reducing the risk of resistance of mealybugs, showing up to 100% effectivity. Although the Latin American banana industry is currently performing trials over other potential effective substances that could be as effective, such as pyriproxyfen, the phase is still very experimental and lacks concluding beneficial results. Moreover, the exploration of alternatives in the context of the COVID-19 pandemic has proven particularly arduous, in the light of legal restrictions and internal requirements that vary from country to country.

Second, the degree to which the chlorpyrifos substance represents risks to human health when used in a targeted manner in some agricultural crops remains unclear. According to the [study](#) "*Genotoxicity of permethrin and chlorpyrifos on human stem and progenitor*

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<sup>1</sup> Environmental Protection Agency of the United States (EPA). "[Chlorpyrifos: Proposed Interim Registration Review Decision Case Number 0100](#)", December 2020, p. 30



*cells at different ontogeny stages: implications in leukaemia development*" carried out by the Josep Carreras Leukaemia Research Institute and published in May 2020, the evidence supported concludes that chlorpyrifos is not able to induce detectable global DNA damage. Therefore, before restricting or changing the tolerances of this substance, more scientific-based evidence is needed.

Moreover, in an available USDA's Pesticide Data Program residue report from 2019, it was shown that from a sample of more than 700 bananas<sup>2</sup>, there were no chlorpyrifos traces found, following therefore EPA's tolerance level of 0.1 mg/kg. The use of these products in our industry follows all the safety guidelines for imports in the United States, allowing us to obtain the previous results in comparison with other crops. The reason why chlorpyrifos does not pose a threat for the safety and health of the consumer relies on the application method, which is not directly sprayed to the fruit, carrying out a very targeted technique. It is used in impregnated plastics to control insects in the fields, therefore, a change in the current permitted levels on bananas imported into the United States will lead to an increase in the use of pesticides by the grower at the plantation and in the farming process. These data show how the use of chlorpyrifos in bananas does not constitute a dietary nor a health risk for consumers, since most of the trace levels are rarely found on the fruit itself but rather in the banana peels, which are not used for consumption. Consequently, the human exposure to the substance remains completely limited in the case of bananas thanks to this controlled application method.

Third, the use of chlorpyrifos in banana plantations remains the most effective method of phytosanitary control against insect pests such as Mealybugs, Colaspis beetle, Aphids or Mites, among others. More specifically, the use of this substance in bananas, which follows the above-mentioned targeted application, has also shown beneficial results for minimizing the losses derived from scale insects and beetles. The presence of such insects in banana plantations can lead to eventual quarantine pests in Latin America, for which chlorpyrifos would become essential in order to keep them under control. Furthermore, prevalence of Mealybugs in bananas imported to the US can lead to disruptions in USDA inspection as well as increased costs derived from fumigation requirements.

Removal of chlorpyrifos tolerance levels could severely threaten and endanger banana production, since these insects produce infestations that significantly affect fruit quality, leading to rejections in commercialization, and thus have an impact in food security, since bananas are a key crop for development in several tropical countries<sup>3</sup>. Additionally, not counting with an alternative resource to fight against bugs and pathogens could lead to a 30% of fruit loss, which would eventually generate an increase in production costs while also decreasing productivity, causing the loss of hundreds of jobs. Thus, as has been argued, bananas are fundamental for enhancing development in low income and food-

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<sup>2</sup> United States Department of Agriculture (USDA). "[Pesticide Data Program](#)", October 2020, Appendix 8; p. 20

<sup>3</sup> Food and Agriculture Organization of the United Nations (FAO). "[Fusarium Tropical Race 4](#)".



deficit countries, accounting for up to 75% of the total monthly household income of smallholder farmers<sup>4</sup>.

Bananas represent an essential source of income for our country, contributing to the development of rural and remote zones. The industry creates jobs for 120 hundred families, energizing the economy of the producing regions of Urabá and Magdalena with 2 million of people, and represents 7% of total non-traditional agricultural exports. Therefore, trade with the United States is very relevant both for maintaining food security as well as for contributing to the rural development of our regions.

Latin American countries contribute majorly to the banana supply in the US, representing therefore a very important destination for our bananas. Banana imports to the US are led by several Latin American countries: Guatemala (40,1%), Ecuador (17,1%), Costa Rica (15,3%), Honduras (9,7%), Colombia (6,6%), Dominican Republic (0,12%) and Panama (0,05%)<sup>5</sup>. Furthermore, according to the US Department of Agriculture, bananas are the most popular fresh fruits for US citizens<sup>6</sup>. Hence, measures that restrict the import levels of chlorpyrifos in the US could severely affect these trade relations as well as endanger the living conditions of all those who contribute to the banana sector in all these countries, putting living wages, food security, employment and productivity at risk.

Likewise, these measures cannot neglect the global health emergency caused by the COVID-19 pandemic, which is generating a worldwide recession in the economic, social and political axes. Through measures such as lockdowns, curfews and travel restrictions, banana producers have experienced several obstacles in the supply chain which have led to shortages and interruptions in the normal provision of food. This global context not only adds more pressure to the banana producers, who are already struggling to keep their livelihoods, but also serves as an obstacle in the exploration of new, alternative substances that can be as effective as chlorpyrifos.

Finally, it is crucial that the EPA considers our statement when reviewing chlorpyrifos, since keeping this substance available for our industry is key for granting the viability and livelihoods of banana farmers. Therefore, we kindly ask the EPA to keep the tolerance level for bananas..

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<sup>4</sup> FAO. "[Banana Facts and Figures](#)". (2016)

<sup>5</sup> OEC. "[United States: Exports, Imports and Trade Partnerships](#)".

<sup>6</sup> United States Department of Agriculture (USDA). "[US per capita los adjusted food availability](#)" (2018)