

## SUBMISSION OF THE GOVERNMENT OF BRAZIL

Biodiesel, ethanol and other biofuels rely on raw materials such as sugarcane, soybeans corn, among others, which require the use of fertilizers for their production. In Brazil, it is worth noting the use of “fertirrigation” with vinasse, the byproduct of ethanol production. This technique greatly reduces the need for traditional mineral fertilizers, such as NPK, which contain potassium (K), phosphorus (P) and nitrogen (N) in their composition, and which, when used in excess, may contribute to water and groundwater pollution, affecting biodiversity and rural, urban and indigenous communities. It is worth mentioning that "fertirrigation" with vinasse has been used for decades in the sugar and ethanol production in Brazil in accordance with environmental regulations and norms.

It should be mentioned, additionally, that since 2022 the rise in fertilizer prices has rendered the search for alternatives in the nutrition of sugarcane plantations economically more interesting. The use of enriched stillage and fertilizers of biological origin (such as bovine manure and chicken litter) has gained importance in the sector. This movement is expected to remain relevant in the 2022/2023 cycle, given the perspective of a slow normalization and despite the technical challenges involved in implementing these solutions.