



GOVERNMENT OF THE VIRGIN ISLANDS OF THE UNITED STATES

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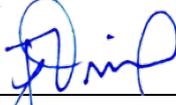
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Office of the Commissioner

TO: Honorable Marise C. James, Esq.
Chair, Committee on Disaster Recovery, Infrastructure and Planning
36th Legislature of the United States Virgin Islands

Other Committee Members

FROM:



Jean-Pierre L. Oriol
Commissioner

RE: VINASSE

There has been a lot of comments in the public about “vinasse” being toxic. As such, I wanted to provide the Committee with some resources on vinasse. According to the scientific journal ScienceDirect ([Vinasse - an overview | ScienceDirect Topics](#)), vinasse is defined as follows:

Vinasse is the liquid residue from the distillation of the product of the [alcoholic fermentation](#) of cane juice, molasses, or the molasses–juice mixture. Due to the suspension of organic and mineral solids, the vinasse presents high [chemical oxygen demand](#) and oxygen biochemistry, besides presenting low pH and high corrosive power, being therefore considered as a **high polluting potential residue**. Produced in the order of 10–15 L per liter of ethanol, the main chemical constituents of the vinasse are potassium and sulfur; however, significant amounts of phosphorus, nitrogen, calcium, magnesium, and some micronutrients are found in it.

The Department acknowledges that vinasse can have adverse environmental effects, particularly if it makes its way into rivers and/or oceans as it is oxygen depleting and would result in fish kills and the death of aquatic vegetation. However, the agricultural industry itself solved this issue in the 1970s through a process called “fertigation” where vinasse is diluted and used as fertilizer due to its high potassium concentration and other mineral solids. The vinasse is said to improve the physical conditions of the soil, thereby reducing the dependence on chemical fertilizers. If the ratio of vinasse is incorrect, there could be adverse effects on the soil. I would imagine the last thing the farmers would want to do to themselves is cause a degradation in the soil quality. Here is a link to the information as provided in the scientific journal, ScienceDirect – [Vinasse - an overview | ScienceDirect Topics](#)