



## **MICROBE-LIFT® Technology Solves Waste Treatment Problems for Feed Lot in Vera Cruz, Mexico**



**Location:** Cattle Ranch Feedlot, Vera Cruz, Mexico

**Background:** This ranch has a capacity of 22,000 head of cattle. The waste system consists of 16 lagoons (12 X 18 X 5 meters each). Twelve lagoons are saturated, 2 are closed, and 2 are new lagoons. In the lot, there are 7 separate sections with two lagoons collecting waste from the holding yards. In the pits, the fall manure is mixed with the existing manure daily, collected in lagoons, and gravity fed to the waste lagoon system. Total pit volume is 1,083 m<sup>3</sup>.

**Objective:** There were a number of issues of concern to the management. There was visual pollution with 5 cm. of surface solids and heavy sludge build-up in each containment lagoon. There were significant odor issues and a concern that effluent waste was contributing to river pollution and affecting downstream ranches. This ranch was facing potential environmental fines for exceeding effluent discharge limits.

### **Their goal was to:**

1. Remove surface crust and sludge from lagoons
2. Achieve a liquid, flowing waste in receiving pits liquefying the entire water column in the pits
3. Improve liquefaction of waste for improved consistency and flowability throughout the system
4. Increase waste degradation to meet effluent parameters
5. Stop polluting nearby land and rivers



Ecological Laboratories developed a program using **MICROBE-LIFT®/DFP** (ML/DFP) including dosage to each lagoon.

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The following before and after pictures show the dramatic results as the scum and sludge are removed from the lagoons and pits.



**Fig.1:** Shows two pictures representing the condition of the lagoon before and after treatment. These pictures show dramatic improvement, eliminating the surface crust in this lagoon.



**Fig.2:** This figure shows another lagoon before and after treatment. Visible crust on a lagoon is almost completely removed after treatment with MICROBE-LIFT® /DFP.



**Fig.3:** These two pictures show another lagoon before and after treatment with MICROBE-LIFT® /DFP

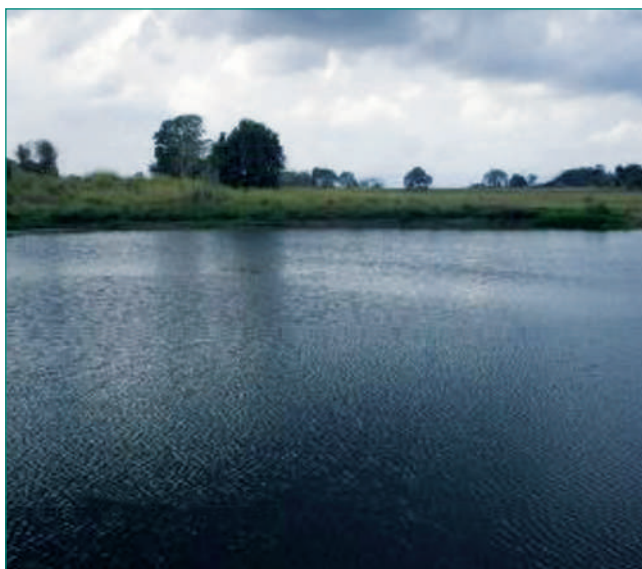




**Fig 4:** Another lagoon cleaned by highly active microbes in MICROBE-LIFT® /DFP shows dramatic improvement.

**Fig 5:** The following pictures show an additional three lagoons cleaned by MICROBE-LIFT® /DFP with the before pictures on the left and the treated lagoons on the right.





**Fig. 6:** Cleaner effluent is discharged to the river. Note the scum on the “before” picture on the left and the much cleaner water on the river after treatment on the right.

### Conclusion:

In conclusion, just as scum removal is evidenced by these dramatic pictures, all the defined objectives of this application were achieved by the described treatment program with **MICROBE-LIFT®** /DFP:

- Reduced surface and bottom solids
- Reduced odor
- Better flow of solids-free waste to the lagoons
- Improved effluent water quality to meet effluent parameters and reduced pollution impact on river and downstream farms.

For more information on **MICROBE-LIFT®** Technology contact

**Ecological Laboratories Inc.**

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