



## Ammonia Reduction with MICROBE-LIFT® Technology in Poultry Composting

**Location:** Experimental Farm, Honduras

**Background:** Lazarus & Lazarus, a technology-based construction firm in Honduras, contacted a distributor of Ecological Laboratories to explore technology to improve their poultry litter processing. Ecological Laboratories’ technologists devised a test protocol using MICROBE-LIFT® technology conducted at an experimental poultry farm. This farm is utilized to evaluate new technology to optimize efficiency of operations for poultry farms.

**Objective:** The objective of this trial was to determine if this technology could:

- Reduce ammonia to create a healthier environment for birds and workers
- Evaluate the incidence of beetle larvae in the broiler bedding
- Accelerate the composting process and produce a higher quality fertilizer.

**Results achieved:** This trial was evaluated by the farm manager, Daniel Martinez, and Daniel Irias, the technical representative from Lazarus & Lazarus. The results are tabulated as follows:

Incidence of Beetle Larvae	Presence of larva actively proliferating.	Presence of larvae significantly lower than control	Intensive visual evaluation in one square meter
Concentration of airborne ammonia	≥10 ppm	5 ppm	Indicator tape for NH4OH
Human appreciation of ammonia odor	High concentration on the human perception	Very low concentration on the human reception	Personal qualitative appreciation
Composting Process	High moisture, very low composting development	Low moisture, significantly higher composting process	Observation of the physical condition of the bedding

Based on the parameters listed above, the broiler bedding trial achieved the following results:

- MICROBE-LIFT® technology worked as expected, lowering the ammonia in the air both quantitatively and qualitatively. It significantly reduced odor noted by human perception and by air measurement showing the recommended 5ppm concentration inside the warehouse.
- There was a significant decrease in the amount of moisture and also a significant acceleration of the composting process.
- There was a reduced incidence of beetle larvae which was noted; this was a secondary experiment of discovery that was tested based on previous experience reducing infestations in other applications. While MICROBE-LIFT® technology is not sold as an insecticide, it appears to change conditions that discourage their growth.

All objectives of the program were successfully achieved.

For more information on MICROBE-LIFT® Technology contact  
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