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Automated Chicken Manure Toxicity Level Reducer System Using Using Optimized Farm Probiotics Solution

GRANTEE: Technological University of the Philippines (TUP)

PRINCIPAL INVESTIGATOR: Engr. Nilo Arago

INDUSTRY PARTNER: Green Chemicals Corporation

GRANT PERIOD: September 16, 2016 to September 15, 2017

CONTRACT AMOUNT: Php 1,000,000 (approximately USD21,300)

Reducing odors in poultry farms

Foul odors and harmful gases from improper management and inappropriate disposal of chicken manure and litter in poultry farms affect nearby communities and pose a threat to human health.

The research, which will be completed in a year, includes pilot-testing and application of the AEM-1 solution in selected poultry farms. Green Chemicals Corporation will provide and supply the necessary effective microorganisms, free of charge, in all tests and experiments. Optimizing the AEM-1 solution using the right volume will significantly reduce harmful odors and gases. Part of the undertaking is to design a device capable of automatic spraying with the right volume of solution for the amount of manure. An added feature will be the automatic refilling of the sprayer once the solution canister is empty.



The poultry farm visited by the research team where the equipment will be possibly deployed

To attain the objectives of the research, two experimental sites will be set-up for comparative analyses and accurate data validation. If results show significant discrepancies, additional experiments will be conducted. Formulation of a sound business plan will then be anchored on validated results.

Final results aim to establish that the AEM-1 solution effectively reduces the odor of chicken manure in poultry farms; thereby, eliminating detrimental effects to both the environment and the health of people in nearby communities.



STRIDE and TUP research team examine the sensor and gas meter which will be part of the system that will be deployed to chicken farms