Proposed Protocol for Determining the Effectiveness
of Microbes on Chicken Growouts

Background: For several years Marine Environmental Products, Inc. have been experimenting with poultry growers in order to determine if the application of Marine Environmental microbes will control ammonia, reduce the nutrients in litter and improve the health of chickens and thus the productivity of growouts. Marine Environmental microbes are naturally occurring, a consortium of archea microbes available in very dense populations up to 90 billion per gram.

When applied correctly, there has been a reduction in ammonia during the growout. The microbes convert ammonia nitrogen to organic nitrate nitrogen. When failures have occurred, it has been determined that disinfectants and pesticides have been applied to the grow out a short time before or immediately after the application of microbes.

The results of some experiments have indicated that nutrients in the litter may be significantly reduced. Other experiments have indicated an increase in the health of the chickens. (There may also be a reduction in pathogens.)

To date, all experiments have been on built up litter. When heat has been added to the houses prior to the release of the chickens, ammonia has built up to levels of 50 to 100 ppm. One of the objectives of this experiment is to determine if Marine Environmental microbes can control ammonia through a number of growouts.

The following is proposed:
Determine at a minimum 12 growout houses that will be used for the experiment. 6 houses must be on one farm for the control and 6 houses must be on the farm to be treated with Marine Environmental products. This procedure will prevent the Marine Environmental microbes from being carried from one treated house to an untreated house.

Remove all litter from the houses. Treat the control houses as they are normally treated.
In the houses to be treated with Marine Environmental, clean and disinfect the floor and walls of the houses. Be certain to remove any residual disinfectant.
Houses #1&2, Apply Marine Environmental LT (5 billion microbes per gram in a powdered betonite clay base) to the bare floor at a rate of 1Lb./1,000 sq. ft.
Houses #3&4, Apply Marine Environmental LT to the bare floor at a rate of 2Lb/1,000 sq. ft.
Houses #5&6, No application

Apply litter to floor.
24 hours before the chickens released do the following:
Houses #1&2, Apply 1Lb of Marine Environmental Ultra LT (90 billion microbes per gram in a food grade corn starch base) mixed into 50 gallons of water at a rate of 1 Lb per 10,000 sq. ft. to the incubation area within 24 hours of releasing the chickens. Repeat this procedure to the growout area 24 hours releasing the chickens to the entire house.
Houses #3&4, Apply 2Lbs of Marine Environmental Ultra LT as above.
Houses #5&6, Apply 1Lb of Marine Environmental Ultra LT mixed into 50 gallons of water to the entire house at a rate of 1Lb per 10,000 sq. ft., 24 hours before the chickens are released.