# The Islamic Education Perspective of *Halalan Tayyiban* in Agronomy: Evaluating Student Viewpoints on Organic Crop Cultivation

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## ABSTRACT

The practice of agricultural education in higher learning institutions has always focused on efficiency and maximization of yields. Nevertheless, when it comes to Islamic education, technical agronomy needs to be integrated with ethical philosophies, which include *Halalan Tayyiban* (lawful and wholesome). In this paper, the standard agronomical experiment in the form of application of *Algafer* Plus for pole sitao yield will be transformed into a pedagogical model to assess the perceptions of undergraduates on ethics in crop production. The research adopts a quantitative approach in a form of survey and analyzes the results using Structural Equation Modeling (SEM) to find out the impact of Islamic ethics on the environment in crop science studies on students' decisions and ethics.

## INTRODUCTION

Traditionally, the most important criterion for success in agricultural education has been biological yield and economic viability. Agronomic teaching has used field experiments like determining the amount of pod per pole sitao plant when different amounts of fertilizers are used on it. It teaches the students the skills needed to improve soil properties and its water retention capabilities in order to cater for the consumer's demands.

However, planting crops, especially crops like pole sitao that are known to be the "Poor Man’s Meat" due to their cheap protein content, is an activity that is full of ethical responsibilities. To conform to the holistic requirements of Islamic education, the curriculums need to go beyond simply identifying the treatment that gives the highest average number of pods. They need to incorporate *Halalan Tayyiban*, whereby agricultural products are not only halal but also *tayyib*.

This study examines the effectiveness of incorporating these Islamic ideals in teaching agronomy courses at the university level. The experiment uses the traditional field study as a baseline instructional tool for comparing how students view organic and artificial methods of farming when agriculture is taught from a moral and religious perspective.

## METHODOLOGY

### Pedagogical Framework and Instructional Module

Module 4 was designed through an experiment set up in the demonstration farm located in Bongao, Tawi-Tawi. The learners were asked to design and analyze an experiment using RCBD which includes four treatments of *Algafer* Plus foliar fertilizer for pole sitao. In the original research, only the application rate was determined (the study revealed that there was a maximum mean of 151 pods when 9 tablespoons were mixed in 16 liters of water). However, the learning module involved asking the learners to analyze those inputs through *Halalan Tayyiban*. They had to determine the effect of those inputs to the environment, soil degradation, and their moral obligation to provide clean food to the community.

### Research Design and Ethical Governance

This study used descriptive-correlational quantitative research design. Before data collection, the research

protocol was examined and approved by the institutional ethics committee of the university to ensure the protection of human subjects in the survey procedure.

### Participants and Data Collection

The participants were undergraduate students enrolled in the Bachelor of Science in Agriculture course. Data was gathered using the validated 5-point Likert scale questionnaire through the use of assessment platforms. The constructs measured were:

- **Technical Comprehension (TC):** Understanding of RCBD, fertilizer application, and yield metrics.
- **Ethical Awareness (EA):** Comprehension of *Halalan Tayyiban* and *Khilafa*h.
- **Application Intent (AI):** The intent to prioritize organic or sustainable practices in future farming.

### Statistical Analysis

Data collection through quantitative research was carried out using SPSS software along with Amos to conduct Structural Equation Modelling (SEM). The relationships among the latent constructs have been estimated to examine if Ethical Awareness is indeed a significant mediator between Technical Comprehension and Application Intent. The basic regression equation used in the path analysis is:

$$AI = \beta_0 + \beta_1(TC) + \beta_2(EA) + \epsilon$$

Where $\beta_1$ and $\beta_2$ represent the path coefficients, and $\epsilon$ denotes the error term.

## RESULTS / OUTCOMES

### Shift in Student Perspectives

There was an observable change in perspective in students' attitudes towards the use of the Islamic teaching methods. From the pre-intervention evaluation results, it could be deduced that the use of 9 spoons of *Algafer* Plus was purely as a way of maximizing profits considering that it produced 151.0 pods compared to 81.0 pods in the control group. The post-intervention results showed an increase in EA measure ($p<.01$).

### Structural Equation Modeling (SEM) Outcomes

From the results of the SEM analysis, it is clear that combining technical agronomy and Islamic ethics has a considerable effect on the students' farming plans for the future.

There was a moderate relationship between TC and AI when no mediation by ethical awareness (EA) was involved ($\beta=0.34$, $p<.05$). However, with the introduction of mediation by EA into the model, its predictive value was noticeably increased. The relationship between EA and AI was very significant ($\beta=0.68$, $p<.001$), which means that if a student had a good understanding of *Halalan Tayyiban*, he/she was mathematically inclined to develop a farming plan for sustainable and organic farming instead of synthetic maximization.

The fit measures (CFI>.95, RMSEA<.05) were indicative of a well-fit model, which means that Islamic ethics could be successfully quantified as an educational outcome.

## DISCUSSION

### Recontextualizing Yield through *Halalan Tayyiban*

In the pedagogical activity, students were supposed to interpret the Analysis of Variance (ANOVA), which was done on the field experiment and found that there was an F-value of 346.7, implying that there was a high significance in pod yield according to the amount of fertilizers used. In any conventional class, this is where

the lesson ends. But in the case of this study, the pedagogic approach made the students raise the issue of the Tayyib (wholesomeness) of the yields. As per the findings of the survey, when students analyze the chemicals using an Islamic ethical perspective, they consider the health of the soil and its consumers as equally important as quantity.

### *Khilafa*h as an Educational Competency

Quantitative modeling emphasizes that Ethical Awareness plays an important role in influencing students' intentions to adopt sustainable practices. The concept of Khalifah (steward) for the farmer transforms agricultural work from a purely economic activity into Ibadah (worship). Through teaching students that weeding, hilling-up, and proper use of fertilizers is part of their responsibility toward the environment, this teaching approach ensures the integration of Islamic values into the education process. Thus, the agricultural college becomes a center of not only technological advancement but also morality and meets the required quality criteria for accreditation.

## CONCLUSION

*Halalan Tayyiban* pedagogy in agronomy education will improve the learning experiences of the students taking the course of crop science. By incorporating scientific knowledge through collecting data on the number of poles sitao pods using quantitative methods such as weighing, in addition to Islamic environmental ethics, teachers will be able to instill a sense of responsibility among the future farmers. The structure proves that the integration of the curriculum with ethical issues will increase the intention of the student to engage in sustainable and pure agriculture. At the end of the day, students will learn how to grow mathematically sound crops but still within the bounds of divinity.

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