Agribusiness Accounting Training for Hydroponic and Urban Farming Farmers in Getasan

Dewi Ari Ani
Universitas Ngui Waluyo
Email Correspondence: dewiari@unw.ac.id

Abstract

Training accountancy agribusiness for farmer hydroponics and urban farming in Getasan Village implemented with objective increase ability management finance business farmer scale small-medium , optimizing recording cash flow , and encourage sustainability business agribusiness . Activities included training in simple accounting theory, cash flow recording and financial statement analysis practices, and one month of post-training mentoring. Results showed that after the training, the average participant's understanding increased from 45% to 72%, and 60% of participants began implementing cash flow recording routinely. This training contributed to strengthening the capacity of hydroponic and urban farming farmers to manage their businesses more professionally and sustainably.

Keywords: Agribusiness Accounting, Hydroponics, Urban Farming, Community Training, Cash Flow.

Introduction

Agriculture urban and systems modern cultivation such as hydroponics has be one of solution in face issue crisis global food , urbanization fast , and limitations Land in urban areas . Research conducted by Payen et al. (2022) states that urban agriculture can support local food security and increase the production independence of urban communities. (Payen et al. 2022)

Due to its flexibility and minimal land requirements, hydroponics can produce stable quantities of crops even in limited urban areas, creating a highly promising business opportunity for communities. In addition to supporting food security, urban farming practices also contribute to social empowerment and economic well-being. Yuan et al. (2022) explain that urban agriculture has significant social and economic value because it creates jobs, strengthens communities, and provides sustainable environmental benefits. (Yuan et al. 2022)

In the context of technological development, hydroponic systems have become a crucial part of modern agribusiness innovation, capable of improving production efficiency. This is in line with Al Mamun et al.'s (2023) statement that hydroponics give more optimal , faster results harvest , and able to support continuity business modern agriculture . (Al Mamun et al. 2023)

However let go from potential big economy , one of the weakness main implementation of urban farming and hydroponics is lack of ability perpetrator business in manage finance . Prihatiningtias (2023) emphasized that part big perpetrator agriculture urban Not yet own recording cash flow and management good finances so that business become difficult growing and not own direction clear business . (Payen et al . 2022)

Limitations literacy finances also have an impact on the inability perpetrator in read performance effort and take decision business in a way measurable . Condition similar found in farmers hydroponics and urban farming in Getasan Village , Semarang Regency . Based on results observation beginning done devotees , majority farmer Not yet do recording cost production , recording cash flow , and analysis profit in a way systematic . Even though aspect accountancy is foundation important For create business transparent , efficient , and sustainable agribusiness . This in line with opinion (Ghozali . 2020) which states that recording good finances will help perpetrator business measure effectiveness business as well as avoid potential losses that are not detected .

Therefore, improving agribusiness accounting skills is a crucial step to support the success of modern agriculture. Agribusiness Accounting Training for Hydroponic and Urban Farmers in Getasan aims to enhance their capacity to manage cash flow, identify costs, calculate profits, and conduct regular business evaluations, thereby promoting sustainability and increasing the competitiveness of farming businesses. By strengthening financial literacy, it is hoped that hydroponic farmers in Getasan will be able to survive market dynamics and develop into more professional agribusiness actors.

Literature Review

Empowerment and food security. For example , Yuan et al. (2022) stated "Urban agriculture... highlights its value beyond profitability, such as social, health, and well-being." (Yuan et al. 2022) . In the context of urban agriculture in Indonesia, Rosdiana et al. (2023) emphasized that urban farming can be an efficient solution to address food security in urban areas. (Payen et al. 2022)

On the technology and business side, Simanullang (2025) shows that hydroponic empowerment through training and mentoring can become an alternative source of income for urban communities, including vulnerable groups (SIMANULLANG 2025) . This underscores that non-technical aspects such as financial record-keeping and agribusiness management are also crucial to supporting business sustainability.

About accountancy agribusiness , although literature specific For hydroponics and urban farming are still limited , concept management cash flow and analysis report finance business farmer in a way simple become runway important . As illustration , Kaufman (2000) in studies regarding urban agriculture mentioned that aspect managerial and planning business is one of the key success initiative agriculture in the environment urban areas . (Kaufman and Bailkey 2000) . Therefore that , training accountancy agribusiness special For farmer hydroponics and urban farming become relevant For implemented in framework devotion public .

Method

Activity devotion to public This implemented through three stages main that is preparation , training , and mentoring as a systematic strategy For increase competence accountancy agribusiness for farmers hydroponics and urban farming actors in Getasan Village .

Stage Preparation

Stage This started with identification and mapping group active targets operate business hydroponics or urban farming. Apart from that , it's done coordination intensive together government village , extension worker agriculture , chairman group farmers and actors agribusiness local so that activities in harmony with need community and sustainable .

At the stage this is also done compilation module training accountancy agribusiness which includes:

Recording techniques daily cash flow business Farming Compilation report finance simple (report profit loss and report position finance) Analysis cash flow for evaluate feasibility and sustainability business The module is designed based practice so that easy understood by the perpetrator agribusiness with background behind diverse education .

Training Stage

The training was held for one full day in the Getasan Village Hall with 30 participants. The training method was interactive through: Participatory lectures Group discussions to share business record keeping issues Direct practice exercises using examples of hydroponic agribusiness transactions Participants were given worksheets containing real-life transactions such as purchasing nutrients, growing media, pump electricity, harvesting, and selling to consumers. A learning-by-doing approach was implemented to ensure participants understood the process. capable direct apply recording .

Stage Mentoring

After training , carried out mentoring intensive during four Sunday through visit field Every week. The goal is to: Evaluate cash flow recording practices in the fieldProvide corrections and solutions to technical obstacles • Motivate participants to consistently record cash flows In addition, participants are given a communication group to share progress and ask questions flexibly.4. Evaluation of Success

The evaluation used a combination of pre-tests and post-tests to measure participants' conceptual understanding. A questionnaire was also used to assess cash flow recording implementation one month after the training. Data were analyzed descriptively and comparatively, looking at the average understanding score and the percentage of participants who implemented routine recording.

Results and Discussion

The results showed significant improvements in financial record-keeping knowledge and skills. The average comprehension score rose from 45 percent in the pre-test to 72 percent in the post-test. Furthermore, 18 of the 30 participants (60 percent) had implemented regular cash flow recording within one month of the training.

Table 1. Summary results activity

Indicator	Before Training	After Training	Percentage Implementation
Average score understanding	45%	72%	—
Number of participants applying cash flow	—	—	60%

Improvement This show that training based practice effective help farmer understand draft previous recording considered complicated . Findings This in line with studies previously stated that training urban agriculture management can increase capacity economy House ladder as well as sustainability business agriculture urban (Circle Archive, 2021).

However, there are still 40 percent of participants who have not recorded consistently. This can be caused by: • Time constraints due to daily workload • Lack of advanced understanding of long-term financial benefits • Technical constraints such as documents or recording formatsFactors the support Kaufman's (2000) statement that the success of urban agriculture depends heavily on management business as well as support adequate institutional framework (Lincoln Institute of Land Policy).

In other words, the increase capacity knowledge Not yet fully ensure change behavior without existence mentoring sustainable , incentives , and support technology For more recording practical .

Conclusion

Activity training accountancy agribusiness in Getasan Village proven effective increase understanding and skills participant in manage business cash flow hydroponics and urban farming. Improvement score understanding from 45 percent to 72 percent and implementation recording by 60 percent participant show that intervention This relevant and useful for agribusiness scale small . Despite the positive results, the level of implementation of financial recording still needs to be improved . Therefore that , some recommendation For program sustainability , namely :

1. Provide long-term mentoring on a periodic basis
2. Developing advanced modules on financial statement analysis and business decision making
3. Encourage the use of simple digital record-keeping applications to improve efficiency.

By implementing these advanced strategies, it is hoped that agribusinesses will be able to manage their businesses independently, professionally, and sustainably. This program can also be replicated in other regions with similar characteristics as an effort to strengthen the community economy based on modern agriculture.

References

Kaufman, Jerry, and Martin Bailkey. 2000. "Farming Inside Cities : Entrepreneurial Urban Agriculture in the United States Lincoln Institute of Land Policy Working Paper Lincoln Institute Product Code : WP00JK1 Abstract The Study Found Both Supporters and Skeptics of Entrepreneurial Urban Agriculture . Obstacles to Such Activities Were Generated from the Interviews Conducted . These Are Discussed under Four Broad Categories — Site-Related , Government-Related , Procedure- Contamination , Site Vandalism , Government and Non-Profit Community Development Group Skepticism , Inadequate Financing , and Staffing Problems . Ways of Overcoming These Obstacles Are Discussed , Premised on the Possibility That Governments at All Levels , Local and National Philanthropic Foundations , and Community Development Corporations Can Offer Stronger Support for Entrepreneurial Urban Agriculture . Actions That Specific Groups Could Initiate to Be More Proactive towards the Nascent Movement of for-Market Urban Agriculture Are Presented ."

Al Mamun, Abdullah, Farzana Naznen, Gao Jingzu, and Qing Yang. 2023. "Predicting the Intention and Adoption of Hydroponic Farming among Chinese Urbanites." *Heliyon* 9(3): e14420. doi:10.1016/j.heliyon.2023.e14420.

Payen, Florian Thomas, Daniel L. Evans, Natalia Falagán, Charlotte A. Hardman, Sofia Kourmpetli, Lingxuan Liu, Rachel Marshall, Bethan R. Mead, and Jessica A.C. Davies. 2022. "How Much Food Can We Grow in Urban Areas? Food Production and Crop Yields of Urban Agriculture: A Meta-Analysis." *Earth's Future* 10(8): 1–22. doi:10.1029/2022EF002748.

SIMANULLANG, NANCI. 2025. "Penerapan Teknologi Hidroponik Dalam Meningkatkan Produksi Sayuran Di Perkotaan." *Circle Archive* 1(7): 1–9. http://www.circle-archive.com/index.php/carc/article/view/347.

Yuan, Grace Ning, Gian Powell B. Marquez, Haoran Deng, Anastasiia Iu, Melisa Fabella, Reginald B. Salonga, Fitrio Ashardiono, and Joyce A. Cartagena. 2022. "A Review on Urban Agriculture: Technology, Socio-Economy, and Policy." *Heliyon* 8(11): e11583. doi:10.1016/j.heliyon.2022.e11583.