

EFFECTIVENESS OF VEGETABLE CULTIVATION ACTIVITIES TO SUPPORT FOOD SECURITY AT CLASS IIB WONOGIRI CORRECTIONAL INSTITUTION



^{1*}Rizq Adyatma Sinulingga, ²Markus Marselinus Soge

^{1,2}Program Studi Teknik Pemasarakatan, Politeknik Pengayoman - Indonesia

e-mail:

^{1*}rizqsinulingga45@gmail.com (corresponding author)

²markusmarselinus@gmail.com

ABSTRACT

This study examines efforts to support food security through vegetable cultivation by utilizing prison land at the Class IIB Wonogiri Correctional Institution. The program is part of an agricultural independence initiative aimed at increasing food reserves, anticipating potential food crises, and contributing to Indonesia's food self-sufficiency. The research uses a qualitative approach, with data collected through observation, interviews, and document studies, and analyzed through data reduction, presentation, and conclusion drawing. The analysis is based on program effectiveness theory and food security theory. The findings show that the program has been implemented by optimizing available land and cultivating relatively easy-to-grow vegetables such as kale, spinach, and eggplant. The harvest is used to supplement the nutritional needs of inmates, indicating that the program contributes positively to institutional food security. However, several obstacles hinder its sustainability, including pest attacks, soil fertility issues, and sanitation challenges. In addition, limited budget allocation creates uncertainty, as the continuity of the program depends on the outcomes of previous harvests. Therefore, improvements in resource management, agricultural support, and funding stability are necessary to ensure the long-term effectiveness of the program.

Keywords: *Effectiveness; Self-Reliance Development; Food Security; Vegetable Cultivation*

INTRODUCTION

Correctional institutions across the world are increasingly recognized not only as places for punishment but also as environments for rehabilitation and reintegration. Modern correctional philosophy emphasizes that inmates must be given opportunities to develop skills, build character, and prepare for a productive life after release (Soetopo, 2017). Within this framework, vocational and independence training programs serve a vital role in equipping inmates with both practical abilities and values of responsibility, discipline, and cooperation. Among the many forms of vocational programs, agricultural training has gained particular attention because of its ability to simultaneously address institutional needs and broader societal goals (Setiawan, 2020).

Food security remains a pressing issue globally, including in Indonesia, where correctional institutions face challenges in providing adequate and nutritious meals to large inmate populations. Rising food costs, limited government budgets, and overcrowded facilities often create strains on prison food supply systems (Depkumham, 2021). As a response, innovative programs that utilize available land and resources for agricultural purposes have been introduced in several institutions. Vegetable cultivation, in particular, has proven to be a strategic choice because it can be implemented with relatively simple resources, provides direct nutritional benefits, and fosters self-reliance among participants (Fitriani, 2020). These programs not only support the internal needs of correctional facilities but also contribute to national agendas on food security and sustainable development (Maxwell & Frankenberger, 1992).

In Indonesia, the Directorate General of Corrections has encouraged prisons to develop independence programs that empower inmates through vocational training (Ditjenpas, 2019). The Class IIB Wonogiri Correctional Institution has responded to this policy by establishing vegetable cultivation programs as part of its rehabilitation strategy. Through these activities, inmates are directly involved in land preparation, planting, maintenance, and harvesting, allowing them to gain practical agricultural skills while contributing to daily food provision within the prison. Beyond the immediate benefits of cost reduction and improved nutrition, the program also plays a role in instilling productive values and providing inmates with livelihood options for life after release (Yuliani, 2021).

This study focuses on analyzing the effectiveness of vegetable cultivation activities at Class IIB Wonogiri Prison in supporting food security and promoting inmate rehabilitation. By applying program effectiveness theory and food security theory, the research examines how well the program achieves its intended objectives and what kind of impact it creates for both the institution and the inmates (Pasolong, 2019; Maxwell & Frankenberger, 1992). The study also considers the relevance of rehabilitation and social reintegration theories, highlighting how agricultural training prepares inmates for successful adaptation upon reentry into society (Soetopo, 2017; Sudarto, 2015). The purpose of this research is to assess the extent to which vegetable cultivation programs contribute to food security within the prison, while also strengthening the personal development and independence of inmates.

Specifically, the study aims to (1) evaluate the effectiveness of vegetable cultivation activities based on key dimensions of program implementation, (2) identify the challenges and limitations faced in carrying out the program, and (3) analyze the broader implications of such activities for correctional rehabilitation and national food security. By doing so, the research seeks to demonstrate that prison-based agricultural programs represent a valuable model for achieving dual objectives: improving institutional resilience and fostering

sustainable rehabilitation for inmates.

LITERATURE REVIEW

Program Effectiveness Theory

Program effectiveness theory provides the foundation for evaluating the extent to which a program achieves its intended objectives. According to Pasolong (2019), effectiveness is a measure of success in reaching predetermined goals through the optimal use of available resources.

This theory emphasizes several dimensions, such as program understanding, accuracy of targeting, timeliness, achievement of objectives, and tangible results. Each dimension serves as a benchmark for assessing whether a program has succeeded in aligning its implementation with its stated goals. In the context of correctional institutions, this theory is highly relevant because it allows evaluation of rehabilitation programs not only in terms of outcomes but also the processes by which they are achieved. Applying this theory to vegetable cultivation activities in prisons enables an assessment of how effectively the program contributes to food security and inmate rehabilitation.

Food Security Theory

Food security theory, as conceptualized by Maxwell and Frankenberger (1992), underscores four key dimensions: availability, access, stability, and sustainability. Availability refers to the sufficient supply of food to meet dietary needs, while access concerns the ability of individuals to obtain food, either physically or economically. Stability highlights the consistency of food supply over time, and sustainability relates to the long-term capacity of food systems to provide adequate nutrition.

This framework is particularly important in analyzing agricultural programs within correctional facilities, where limited resources often constrain food provision. By applying this theory, vegetable cultivation programs can be evaluated not only for their immediate impact on food supply but also for their contribution to long-term resilience and self-reliance within correctional environments.

Rehabilitation Theory

Rehabilitation theory emphasizes the importance of equipping inmates with skills, values, and attitudes that support their reintegration into society. Soetopo (2017) explains that rehabilitation goes beyond punitive measures, aiming instead to transform inmates into productive members of society. This theory supports the idea that correctional programs should focus on education, training, and behavioral development as tools to reduce recidivism.

In the case of vegetable cultivation, rehabilitation theory helps explain how agricultural training fosters discipline, responsibility, and cooperation among inmates. Such attributes are not only beneficial for prison life but also provide a foundation for post-release adaptation, enabling former inmates to pursue lawful livelihoods and reintegrate successfully.

Social Reintegration Theory

Social reintegration theory highlights the process by which former inmates return to the community and rebuild their social and economic roles. Sudarto (2015) emphasizes that

reintegration requires preparation in both economic and social aspects to prevent recidivism. Correctional programs that focus on skill development, such as agricultural training, are therefore integral to reintegration strategies. Vegetable cultivation equips inmates with practical, marketable skills while simultaneously instilling values of teamwork and responsibility.

These skills and values increase their chances of finding employment or engaging in entrepreneurial activities upon release. By applying this theory, the program can be viewed not only as a means of ensuring prison self-sufficiency but also as a stepping stone toward sustainable reintegration into society.

METHOD

This study employed a qualitative approach with a descriptive design to examine the implementation of vegetable cultivation training programs at the Class IIB Wonogiri Correctional Institution. Qualitative research, according to Sugiyono (2023), is grounded in the philosophy of post-positivism and is particularly suited for studies focusing on natural settings. Within this approach, the researcher plays a central role in collecting and interpreting data. Triangulation techniques were applied by combining multiple data sources such as interviews, observations, and document analysis (Sugiyono, 2023).

The descriptive design was selected to provide a comprehensive picture of how vegetable cultivation programs are implemented in correctional institutions. Through this design, the study focuses on capturing the processes, challenges, and results of the program in detail. Rather than testing hypotheses, the descriptive method allows the researcher to portray ongoing realities. This approach makes it possible to examine the contributions of agricultural training to food security and inmate rehabilitation. Data analysis followed the Miles and Huberman model (as cited in Sugiyono, 2023), which consists of three interconnected stages: data reduction, data display, and conclusion drawing. Data reduction was performed by selecting, simplifying, and categorizing the most relevant findings from the field. Data display was then conducted using narrative descriptions, tables, and diagrams to improve clarity and interpretation. Finally, conclusions were drawn by interpreting the displayed data and verifying them against supporting evidence.

The research was conducted between February and July 2025 at the Class IIB Wonogiri Correctional Institution. Participants included two inmates directly involved in vegetable cultivation, several correctional officers overseeing the program, and the head of the institution. Data collection relied on semi-structured interviews guided by prepared protocols. These were complemented with direct observations of activities in the cultivation area (branggang) and reviews of institutional documents. By applying the Miles and Huberman analytical framework, this study seeks to present a holistic understanding of vegetable cultivation programs in correctional settings.

The findings are expected to reveal how the program supports institutional food security while also contributing to inmate rehabilitation. Furthermore, the study illustrates the value of agricultural training as part of independence-building initiatives in prisons. Through this, the research highlights the dual benefits of such programs: meeting nutritional needs and equipping inmates with sustainable skills.

RESULTS AND DISCUSSION

Effectiveness of Vegetable Cultivation Activities to Support Food Security at Class IIB Wonogiri Correctional Institution

The study on the Effectiveness of Vegetable Cultivation Activities to Support Food Security at Class IIB Wonogiri Correctional Institution provides a broader and more detailed understanding of how agricultural programs in prisons function as both a rehabilitation tool and a mechanism for addressing institutional food needs. Correctional institutions today are increasingly expected to go beyond their traditional role as detention centers, evolving into places where rehabilitation, education, and empowerment are central (Depkumham, 2021). Within this framework, agricultural initiatives such as vegetable cultivation not only offer a direct response to the issue of food provision but also create an environment for personal growth, skill acquisition, and the development of positive behavioral patterns among inmates.

The decision to utilize vacant land for farming demonstrates innovation in correctional program planning, as it simultaneously reduces operational costs, provides nutritional support, and instills values of productivity, cooperation, and responsibility in inmates (Setiawan, 2020). As a result, the initiative serves as a dual strategy that strengthens food security and supports the correctional mission of building self-reliance and character development. The effectiveness of vegetable cultivation programs can be analyzed comprehensively using Pasolong's (2019) five dimensions of program effectiveness: program understanding, target accuracy, timeliness, goal achievement, and tangible outcomes. Each of these dimensions sheds light on how the program impacts both institutional objectives and the lived experiences of inmates.

1. **Program Understanding**The level of inmate understanding is central to the success of the program. Before engaging in cultivation activities, inmates were provided with orientation sessions explaining the objectives, benefits, and procedures of the program. This process ensured that inmates did not view farming merely as a routine obligation but recognized its broader rehabilitative and educational value (Yuliani, 2021). With this awareness, inmates were more likely to engage sincerely and develop motivation, rather than perceiving the activity as a formality. This highlights the role of communication and education in ensuring that rehabilitation programs resonate with their participants.
2. **Target Accuracy**The program was designed to engage inmates who demonstrated interest and potential in agriculture. A simple selection mechanism helped identify suitable participants, ensuring that those with willingness to learn and relevant background experiences could contribute effectively. Inmates with prior agrarian knowledge were able to share their expertise, enabling peer-to-peer learning that enriched the program (Rahman, 2018). This deliberate targeting not only optimized outcomes but also fostered a sense of inclusion and relevance, making the program more meaningful for participants.
3. **Timeliness**Adherence to planting and harvesting schedules reflects good management and organizational planning within the prison. Timeliness is an important indicator of program discipline, showing that inmates and officers can coordinate effectively to achieve shared goals (Fitriani, 2020). Although challenges such as unpredictable weather, pest infestations, and equipment shortages occasionally caused delays, these setbacks provided practical lessons in resilience

and adaptation. Thus, the dimension of timeliness demonstrates the program's ability to cultivate not just crops, but also qualities of patience, problem-solving, and perseverance among inmates.

4. **Goal Achievement**The program has clearly met its dual objectives of improving institutional food security and enhancing inmate skills. Harvests of vegetables such as water spinach, spinach, and eggplants are directly incorporated into inmates' meals, diversifying the nutritional intake and reducing dependency on external suppliers (Ditjenpas, 2021). On the training side, inmates have acquired hands-on knowledge of agricultural cycles, including soil preparation, planting, irrigation, pest management, and harvesting techniques. This comprehensive exposure ensures that inmates gain marketable skills that may assist them in post-release employment or entrepreneurship, thereby supporting their reintegration.
5. **Tangible Changes**One of the most powerful indicators of program success lies in the tangible behavioral changes observed among inmates. Participants displayed higher levels of discipline, responsibility, and productivity, managing their allocated plots with a sense of ownership (Setiawan, 2020). Beyond skill acquisition, the activities helped reduce psychological stress and monotony associated with confinement, offering therapeutic benefits and enhancing overall well-being. These behavioral shifts are critical because they align directly with the rehabilitative mission of correctional facilities, demonstrating that agriculture can be both a practical and transformative intervention.

Challenges in Program Implementation

Despite its successes, the program is not free from challenges. Agricultural activities are vulnerable to a variety of environmental and institutional obstacles. Pests such as caterpillars, leafhoppers, and aphids regularly pose threats to crops, reducing yields and requiring constant vigilance. Soil fertility issues also limit productivity, making it necessary to consider external support in the form of fertilizers or soil management programs (Sari, 2022).

Infrastructure problems, including inadequate water supply systems and poor sanitation, further complicate cultivation efforts. Moreover, financial constraints restrict the program's capacity to invest in improvements or scale-up operations, leaving it highly dependent on the success of current harvests. These challenges highlight the importance of stronger institutional support, better resource allocation, and collaborative partnerships with external agricultural stakeholders.

Theoretical Analysis

When analyzed through the lens of program effectiveness theory (Pasolong, 2019) and food security theory (Maxwell & Frankenberger, 1992), the vegetable cultivation initiative at Class IIB Wonogiri emerges as a model of good practice. The program fulfills all dimensions of effectiveness: participants understand the program, it is well-targeted, timeliness is largely maintained, goals are achieved, and observable positive changes result.

This demonstrates how correctional programs can be evaluated systematically, ensuring accountability and evidence-based decision-making. From the perspective of food security, the program contributes to the four pillars: availability, access, stability, and sustainability. Availability is achieved through increased production of vegetables within

the prison environment. Access is enhanced by allowing inmates to directly consume food they have produced, creating both physical and psychological benefits. Stability is maintained as the program continues to yield results despite technical and environmental challenges, showing resilience under pressure. Sustainability, while limited by resource constraints, holds strong potential through future partnerships, innovation, and policy support (Maxwell & Frankenberger, 1992). In this way, the program serves not only immediate institutional needs but also contributes to broader national food security goals.

Moreover, the initiative resonates strongly with rehabilitation theory, which stresses equipping inmates with skills, positive values, and resilience in preparation for social reintegration (Soetopo, 2017). By learning and practicing agriculture, inmates internalize discipline, teamwork, and perseverance—qualities essential for successful reintegration. This supports reintegration theory, which emphasizes the necessity of social and economic readiness to prevent recidivism (Sudarto, 2015). Hence, the vegetable cultivation program at Class IIB Wonogiri illustrates the integration of practical skill development with broader rehabilitative and societal objectives.

Broader Implications

The discussion of this program's implementation and outcomes reveals broader implications for correctional practices across Indonesia. The success of vegetable cultivation at Class IIB Wonogiri shows that correctional institutions can be sites of innovation that respond effectively to dual challenges: managing prison populations and contributing to national priorities such as food security.

It also underscores the potential for prisons to become training grounds where marginalized populations gain skills that are valuable for both personal and community development. This shifts the perception of prisons from being purely punitive spaces to becoming transformative institutions with tangible social benefits. Future replication of similar programs across other prisons could foster a network of correctional agriculture initiatives, contributing to both sustainable corrections and resilient food systems nationwide.

CONCLUSIONS AND SUGGESTIONS

This study on the Effectiveness of Vegetable Cultivation Activities to Support Food Security at Class IIB Wonogiri Correctional Institution highlights the significant role of agricultural programs in correctional facilities as both a means of meeting institutional food needs and a tool for inmate rehabilitation. The findings demonstrate that vegetable cultivation programs not only contribute directly to food security by providing fresh produce for daily meals but also instill valuable skills, discipline, and responsibility in inmates.

These experiences prepare them for reintegration into society and reduce the likelihood of recidivism, aligning with the broader objectives of correctional rehabilitation. When analyzed through the five dimensions of program effectiveness, the program has proven to be effective. Inmates understand the objectives and benefits of the activities, target accuracy is achieved by involving those with relevant interest and potential, timeliness is maintained through planned cultivation schedules, goals are successfully met in terms of food availability and skill acquisition, and tangible positive changes are evident in inmates' behavior, productivity, and time management.

From the perspective of food security, the program addresses the four essential

dimensions of availability, access, stability, and sustainability. It increases the availability of vegetables within the institution, enhances access as inmates consume nutritious food they help to produce, and ensures stability by maintaining regular contributions to daily needs despite technical challenges such as pests or limited resources. Although sustainability remains dependent on external support and funding, the program has strong potential for expansion, particularly through collaborations with agricultural experts, local governments, and private partners.

Furthermore, the program reflects principles of rehabilitation and social reintegration theory by equipping inmates not only with technical farming skills but also with values of cooperation, responsibility, and perseverance. These outcomes contribute to personal development and open opportunities for employment after release, reinforcing the dual function of the program in strengthening institutional resilience and empowering individuals. To ensure long-term success and wider impact, stronger policy support and institutional commitment from the Directorate General of Corrections and related authorities are necessary to integrate agricultural programs into official rehabilitation strategies. Improvements in infrastructure, particularly irrigation systems, soil management, and pest control, are crucial for overcoming technical obstacles. Continuous training for both inmates and staff should be provided to enhance agricultural knowledge, entrepreneurial competencies, and management skills.

Building partnerships with universities, NGOs, and private enterprises will enrich the program with expertise, financial resources, and market access, while systematic monitoring and evaluation should be implemented to measure outcomes, identify challenges, and encourage innovations such as hydroponics or organic farming. Finally, given its proven effectiveness, vegetable cultivation programs should be replicated in other correctional institutions across Indonesia, tailored to local contexts to maximize their benefits.

In conclusion, vegetable cultivation at Class IIB Wonogiri Correctional Institution demonstrates how correctional programs can achieve dual objectives: ensuring food security within prisons and promoting rehabilitation through skill development and character building. With sustained support, collaboration, and innovation, such programs can serve as a national model that benefits not only the correctional system and inmates but also the broader agenda of food resilience and social reintegration in Indonesia.

REFERENCES

- Depkumham. (2021). Laporan Tahunan Pemasyarakatan. Jakarta: Kemenkumham RI.
- Ditjenpas. (2019). Data Program Pembinaan Narapidana. Jakarta: Direktorat Jenderal Pemasyarakatan.
- Ditjenpas. (2021). Program Pembinaan Kemandirian di Lapas. Jakarta: Direktorat Jenderal Pemasyarakatan.
- Fitriani, A. (2020). Efektivitas Program Pertanian di Lapas. *Jurnal Pemasyarakatan*, 12(2), 45-57.
- Maxwell, S., & Frankenberger, T. (1992). *Household Food Security: Concepts, Indicators, and Measurements*. UNICEF/IFAD.
- Pasolong, H. (2019). *Teori Administrasi Publik*. Bandung: Alfabeta.
- Rahman, B. (2018). *Program Pembinaan Narapidana*. Yogyakarta: Deepublish.
- Sari, L. (2022). Tantangan Ketahanan Pangan di Lapas. *Jurnal Sosial Humaniora*, 14(1), 78-

90.

Setiawan, D. (2020). *Pembinaan Kemandirian Narapidana Melalui Pertanian*. Surabaya: Unesa Press.

Soetopo, H. (2017). *Rehabilitasi Narapidana dalam Perspektif Pemasyarakatan*. Bandung: Refika Aditama.

Sudarto. (2015). *Hukum dan Reintegrasi Sosial*. Semarang: Pustaka Magister.

Sugiyono. (2023). *Metode Penelitian Kualitatif*. Bandung: Alfabeta.

Yuliani, N. (2021). Pemberdayaan Narapidana di Lapas. *Jurnal Hukum & Pembangunan*, 51(3), 201-220.