

**ATTITUDE AND PERCEPTION OF LOCAL FARMERS TOWARD  
AGROBIODIVERSITY IN HOME GARDEN. CASE STUDY: BUOT VILLAGE,  
CHIENG YEN COMMUNE, VAN HO DISTRICT, SON LA PROVINCE, VIETNAM**

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**Abstract**

One of today's key challenges is how to increase production to meet the growing demand for food, feed, and bioenergy while conserving biodiversity and reducing the pressure on natural resources and ecosystems. Agrobiodiversity is not only the key to food security and nutrition but also to conserving the ecosystem foundations necessary (e.g. of water quality, nutrient cycling, soil formation and rehabilitation, erosion control, carbon sequestration) to sustain life and rural livelihoods. This study examined the perception of farmers on agrobiodiversity and the factors behind the farmers' decision to adopt agrobiodiversity through applying syntropic farming (food forest) in their home gardens. A semi-structured interview approach was used to gather information from 39 local farmers in Buot village, Son La province, Vietnam. The survey found that 14 households of the total households have been adopting agrobiodiversity. Most of the farmers asked understood the importance of agrobiodiversity and were willing to adopt syntropic farming. However, challenges in capital, market access, and no irrigation systems are barriers that hinder their adoption of syntropic farming. The findings of the study will provide information for policy-makers in providing enabling conditions to facilitate agrobiodiversity in the study area.



## THÁI ĐỘ VÀ NHẬN THỨC CỦA NGƯỜI DÂN ĐỐI VỚI ĐA DẠNG SINH HỌC NÔNG NGHIỆP TRONG VƯỜN NHÀ. NGHIÊN CỨU TRƯỜNG HỢP TẠI BẢN BƯỚT, XÃ CHIỀNG YÊN, HUYỆN VÂN HỒ, TỈNH SƠN LA, VIỆT NAM

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Thông tin bài viết	Tóm tắt
<p>Ngày nhận bài: 03/03/2023</p> <p>Ngày sửa bài: 5/5/2023</p> <p>Ngày duyệt đăng: 8/8/2023</p>	<p>Một trong những thách thức chính hiện nay là làm thế nào để tăng sản lượng nông sản đáp ứng nhu cầu ngày càng tăng về lương thực, thức ăn chăn nuôi và năng lượng sinh học đồng thời bảo tồn đa dạng sinh học và giảm áp lực lên tài nguyên thiên nhiên và hệ sinh thái. Đa dạng sinh học nông nghiệp không chỉ là chìa khóa cho an ninh lương thực và dinh dưỡng mà còn bảo tồn các nền tảng hệ sinh thái cần thiết (ví dụ: chất lượng nước, chu trình dinh dưỡng, hình thành và phục hồi đất, kiểm soát xói mòn, hấp thụ carbon) để duy trì sự sống và sinh kế nông thôn. Nghiên cứu đánh giá nhận thức của nông dân về đa dạng sinh học nông nghiệp và các yếu tố đằng sau quyết định của nông dân áp dụng đa dạng sinh học nông nghiệp thông qua việc áp dụng canh tác đa tầng tán (vườn rừng) trong vườn nhà của họ. Phương pháp phỏng vấn bán cấu trúc được sử dụng để thu thập thông tin từ 39 nông dân địa phương tại bản Bưởi, tỉnh Sơn La, Việt Nam. Cuộc khảo sát cho thấy 14 hộ gia đình trong tổng số các hộ gia đình đã áp dụng đa dạng sinh học nông nghiệp. Hầu hết nông dân được hỏi đều hiểu tầm quan trọng của đa dạng sinh học nông nghiệp và sẵn sàng áp dụng hình thức canh tác tổng hợp. Tuy nhiên, những thách thức về vốn, tiếp cận thị trường và không có hệ thống tưới tiêu là những rào cản cản trở họ áp dụng mô hình canh tác đa tầng tán. Kết quả của nghiên cứu sẽ cung cấp thông tin cho các nhà hoạch định chính sách trong việc cung cấp các điều kiện thuận lợi để thúc đẩy đa dạng sinh học nông nghiệp trong khu vực nghiên cứu.</p>
<p><b>Từ khóa</b></p> <p>Vườn rừng, canh tác tổng hợp, năng suất vườn, lợi ích môi trường, sản xuất nông nghiệp bền vững</p>	

### 1. Introduction

Agrobiodiversity is a variety of animals, plants, and other organisms utilized for food and agriculture, covering crops, livestock, forestry, and fisheries [5]. The importance of agrobiodiversity is not only to fulfill human needs but also to protect the ecosystems. However, climate change and human disturbances have

led to the biodiversity loss and affect the food system [1]. Therefore, plant development in genetically uniform varieties, breeds, and cropping systems is recognized as an anticipation way to face agrobiodiversity loss. Sustainable agrobiodiversity can also be represented through agroforestry, a type of land-use system combining woody perennials (trees, shrubs, bamboo, etc.) with crops and animals on the same land [4].

Agroforestry can be achieved in the form of a home garden, a cultivation type utilizing a small portion of land around the household [15]. The set of a home garden is similar to a mixed cropping system that covers vegetables, fruits, timber crops, cash crops, spices and herbs, ornamental plants, and medicinal plants combined with livestock and ponds [7].

Agroforestry in the home garden is one of the strategies to work towards a better food security system, climate change adaptation, and livelihood support systems. Therefore, supporting agroforestry is necessary to maximize the potential of agroforestry benefits [6]. Agroforestry has many types of implementations, for example, syntropic farming. Syntropic farming adopts the concept of agroforestry which focuses more on food production while still utilizing non-food plants (timber

trees, medicinal plants, fuel crops, etc.) [14]. However, syntropic farming may not be familiar enough yet among researchers and farmers. Thus, this paper discussed the perception and attitude of small-holder farmers in the north of Vietnam about agrobiodiversity and syntropic farming, explores the status of agrobiodiversity in the study area, and analyzes the challenges in adopting syntropic farming.

## 2. Materials and methods

### 2.1. Study area

Northwest Vietnam covers 2.8 million hectares and consists of four big provinces, Son La, Dien Bien, Lai Chau, and Lao Cai. Van Ho (Figure 1) was a part of the Moc Chau district, then was separated due to population growth.

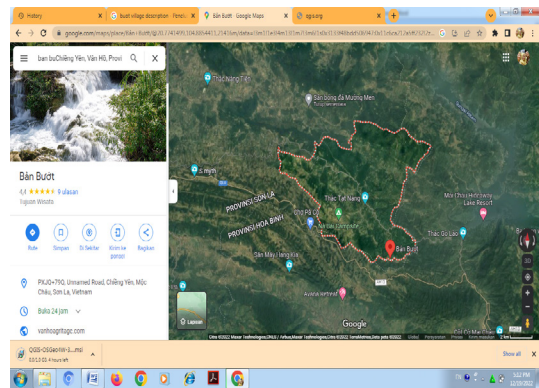


Figure 1. Map of Buot village in Chieng Yen commune (red pin) [18, 8]

Van Ho has an area of 97,984 hectares and is the land of many ethnic minority groups (Dao, Hmong, Muong, and Thai). 20% of the district is agricultural land (19,946 hectares). Crops are mainly maize, winter rice, tea, upland rice, arrowroot, and cassava [18]. This study conducted in September 2022 in Buot Village, Chieng Yen Commune, Van Ho district, Son La province, Viet Nam. Buot village (*Bản Bướn* in Vietnamese) is one of the villages in the North-West of Vietnam. Buot village located in the Van Ho district and is 143.6 kilometres away from the central part of Ha Noi

### 2.2. Data Collection

This study included 39 households of local farmers that adopt home garden activities and other cultivations in other places. The questionnaires used a semi-structured approach. There were four focuses of the questionnaire: (1). Demographic information which focused on the general information of the interviewees and the basic information of their planting

areas and habits, (2). The farmer's knowledge about agrobiodiversity focused on gaining their opinion and experiences, (3). The status of farmers' home gardens (the implementation of agrobiodiversity), and (4). The perception of farmers about agrobiodiversity includes the costs and benefits. Along with interviewing, field observation was implemented to cross-check the information.

### 2.3. Data analysis method

The interview data were analyzed using Microsoft Excel to calculate the Likert scale percentage. Thematic analysis was employed to explore qualitative responses and gather participants' perceptions [3]. Researchers summarized key points and identified themes or patterns from the data set. The method helped observe similarities and differences in answers [12]. The study focused on farmers' experiences with agrobiodiversity in home gardens. The data were carefully reviewed, transcribed, and coded to

find recurring phrases and themes [3]. Codes were discussed among researchers to develop themes and identify ideas. Themes were grouped and revised to align with the research purpose and encompass all interview data [3]. Standout quotes from interviews were included in the results section

### 3. Results

#### 3.1. Demographic information

Table 1 describes about the basic information of the respondents. The number of respondents is actually 39 but one farmer chose not to complete some data/information on the questionnaires which makes only 38 respondents completing all the questionnaires. The gender of respondents is almost equal between male and female with the most productive farmers age range is around 39-48 with the average of education level is primary school (23 respondents)

**Table 1. The basic information of the respondents (Buot village farmers)**

Variable	Responses	Value	Percentage (%)
Number of households		39	
Gender	Male	20	51.28
	Female	19	48.72
Age	18-28	-	-
	29-38	6	15.38
	39-48	20	51.28
	49-58	7	17.95
	59-68	3	7.69
	>68	3	7.69
Education level	Illiterate	1	2.56
	Primary school	23	58.97
	Secondary school	5	12.82
	High school	3	7.69
	Technical school	-	-
	College/ university	-	-

In terms of land size, most of farmers utilize their garden area for agricultural purposes (70-20,000) as shown in Table 2. Half of the farmers have crops, livestock, and fish ponds. All the lands are self-owned. The farmers in this village also implement several types of cropping system which is common to find in Vietnam, especially on the home garden scale. Inter-cropping is the most selected. The home garden types the farmers have the most is “other” which is referred as home gardens without any ponds/cattle. In average, there are 28 species of plants (richness) in a home garden, while the number of plants in each species (evenness) is varied. According to the farmers, they mostly rely on rain harvesting methods for watering their gardens because they do not build any irrigation system, for example, sprinkler or drip irrigation.

**Table 2. The basic information of the land status and condition**

Variable	Responses	Value
Land size	Cultivation	70-20,000
	Housing	60.5-1000
	Other purposes	50-200
Ownership of the farm	Self owned	30
	Rented	-
	Employee	-
Type of Vietnamese home garden	VAC	15
	Improved VAC	-
	RVAC	-

Variable	Responses	Value	
Total of plant species	VACB	-	
	Other	23	
	28 (average)		
	Cropping systems	Mono crops	11
		Inter-cropping	21
		Crop rotation	6
		Agroforestry	4
Cultivation on steep slopes		2	
Others		-	
Irrigation systems	Reservoir	9	
	Watershed/rain harvest	15	

Referring to the economic status and access to credit for farmers in Buot village in Table 3, the farmers stated that they earn around 1,000,000 to 80,000,000 VND/year from the mixed garden they have. This income supports their daily needs since half of the farmers mentioned that they do not have any support or funding from other parties although 13 of the farmers mentioned that they obtain support from the government. However, they do not specify which level

of government funds their garden needs. The support from a bank means that they have a loan from the bank to build houses and buy the tools they need. Farmers also mentioned that support from the government aims to fulfill the household needs, such as for children's education, toilet construction, and monthly funding of around 500.000 VND. The farmers also get support from their relatives in buying the ducklings.

**Table 3. The basic information of the economic status and access to credit**

Variable	Responses	Value
Average income from homegarden	Mixed garden	1,000,000-80,000,000 VND/year
Access to credit	Government	13
	Bank	3
	NGO/project	3
	Others	3
	No support	17

The researchers also asked farmers about the labor for managing the garden. Since all gardens are self-owned, they do not have any labor outside their family members. There is an equal contribution between husbands and wives in sharing home garden work

**Table 4. The working contribution of family members in home garden activities**

Family members	Average of contributions (%)
Father	44
Mother	48
Grandparents	24
Children	33
Hired labor	-

### 3.2. Attitude and perception of agrobiodiversity

Farmers in Buot village have an equal position in understanding the definition of agrobiodiversity. According to the interview results, the number was equal between those who understand the definition of biodiversity and those who do not (19 said they understand agrobiodiversity while 19 said they do not have any thought about

agrobiodiversity, and another 1 gave no response). There are threespecific types of perception given by the farmers as follows:

(1). Improvement of garden productivity

Those who understand agrobiodiversity mentioned that they understand that agrobiodiversity brings benefits in the productivity of their home garden that will also upscale the family income.

*“I have experience in agrobiodiversity and I understand that agrobiodiversity helps to improve the productivity of my garden because I can harvest many kinds of different yields at the same time”*(R1).

There are 12 respondents have the same argument that agrobiodiversity helps them improve garden productivity by the variation of plants/livestock they can raise on limited land size. This response is also related to their perception that more productivity of crops they have will lead to more income for the family.

(2). Land management

Besides improving garden productivity, the farmers also believe that agrobiodiversity is the solution to managing land use because, in their opinion, agrobiodiversity will let them plant as many trees and crops as they want. Among all respondents, there are 4 respondents claim that agrobiodiversity is beneficial to their land area which is used as home garden space.

*“I notice that agrobiodiversity facilitates me to manage my land in a proper way through land maximization. I can cultivate a lot of plants in my garden thus there is no wasted space”* (R4).

(3). Environmental benefits

In terms of environmental benefits, farmers stated the possibility of agrobiodiversity in tackling the environmental issues in the table 5:

**Table 5. The responses of farmers’ perception of benefits of agrobiodiversity toward environmental issues**

Questions	Responses	
	Yes	No
Do you think that crop diversity can decrease the soil erosion, and increase soil nutrients?	33	5
Did you know that mixing crops can decrease negative environmental impact?	32	6
Did you know that applying crop diversity decrease pest and diseases?	29	9
Did you know that crop diversity increases crops nutrients?	26	12
Do you think there is an immediate need to apply crop diversification in your practices?	32	5

Based on Table 5, respondents demonstrated a significant positive outlook on the benefits of agrobiodiversity. The highest positive response (33 respondents) was for reducing soil erosion and increasing soil nutrient through the ability of trees and crops to absorb water and strengthen soil resistance. Conversely, knowledge gaps possibly contributed to the less positive response on agrobiodiversity’s potential to increase crop nutrients. However, overall, farmers expressed strong positivity towards agrobiodiversity in pest management. Only 6 farmers reported pest issues, with their crop varieties ranging from 1 to 6 species around the garden. In general, positive responses to questions related to the impact of agrobiodiversity on environmental problems outweighed negative ones, indicating a high level of trust among farmers in agrobiodiversity. Nevertheless, one farmer did not respond to the question about the need to apply crop

diversification at the home garden, resulting in 37 out of 38 farmers responding to this question. On the other hand, there are also some farmers that have no positive responds at all about agrobiodiversity in all forms as stated by this respondent:

*“I do not have any clue regarding agrobiodiversity and I do not think that this practice will give any benefits to me”* (R6).

*“I want to take a look at the type of trees because I have no experience yet in this”* (R7).

The less interest of farmers in agrobiodiversity can also come from the lack of knowledge from farmers about this practice. Although the farmers feel interested in implementing this method but they do not see the full practice yet of agrobiodiversity which make them doubt running agrobiodiversity in their home garden.

**3.3. Status of agrobiodiversity adoption**

The status of agrobiodiversity adoption among farmers is also considered to find how far the farmers know about this concept.

**Table 6. The status of agrobiodiversity adoption**

The status of adoption		
Adopting agrobiodiversity	Non-adopting agrobiodiversity	No response
14 farmers	21 farmers	4 farmers

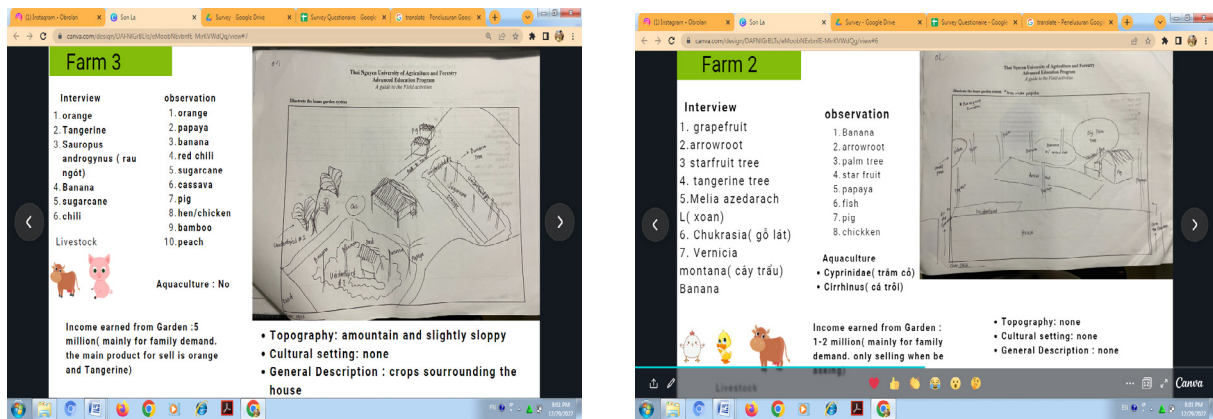
Table 6 mentions about the total of farmers who do not apply agrobiodiversity is more than the number of farmers who apply agrobiodiversity. This claim is made by the farmers with some opinions behind their decision in adopting agrobiodiversity:

*“I already adopted agrobiodiversity based on my own experiences with the VAC method with the total of plants, livestock, and fish around 13 species, and I*

*got 80.000.000 VND/year from my garden. The total of land I have for cultivation is 600” (R1).*

Farmers’ income from agrobiodiversity varies based on total plants, livestock, ponds, and lands. External factors like yield, pests, fruit taste, and growth rate also influence garden sustainability. Farmers manage their home garden areas with diverse crops and trees (e.g., banana, pomelo, sugar cane, taro, corn, pumpkin, medicinal plants). Livestock includes pigs, chickens, cows, and ducks. Each garden has 5 to 14 species with varying plant quantities (10 to 150). Harvest yields range from 100 kg/month to 500 kg/year, depending on the species.

Farmers in this study area consume their own products and sell their yields when consumer asks, especially for tourism purposes. Since this area is managed by Agritage, the demand of yields mostly comes from tourists who come and stay in the village.



**Figure 2. Illustration of how the farmers arrange the position of home garden around their living house**

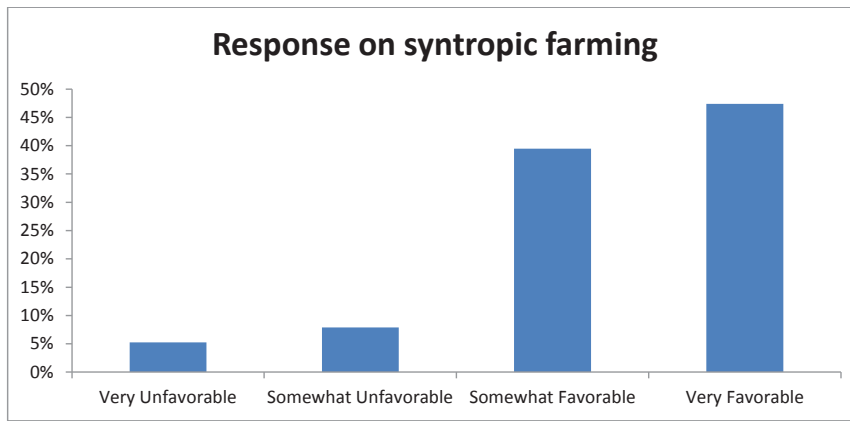


**Figure 3. A home garden with diverse species in Buot village**

There are more farmers that are not interested with agrobiodiversity based on the interview results. As one of them states that:

*“I implement agrobiodiversity but I do not feel any benefits of it because this is hard to manage” (R11).*

Based on the interview results, the farmers are still not sure about the agrobiodiversity implementation due to the limits they have. The most issues that the farmers have are about capital needs, pests and disease, and some farmers are not confident enough to fully adopt agrobiodiversity because they think that this approach is not worth the result



**Figure 4. Responses of farmers toward syntropic farming**

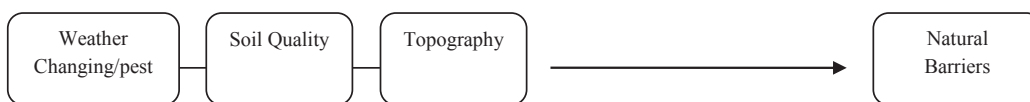
The authors also surveyed farmers’ willingness to adopt syntropic farming in their home garden. The result showed that 47% of the respondents have high interest in syntropic farming (Very Favorable).

**3.4. Barriers in adoption agrobiodiversity**

The farmers might have positive view towards agrobiodiversity but most of them do not practically follow it due to some barriers they deal with.

(1). Natural Barriers

The first challenge is natural barriers which consist of weather, pest, soil quality, and the topography. The natural barriers are those challenges faced by farmers in terms of natural drivers that cannot be controlled by human with 20 responses.



**Figure 5. The natural barriers that become challenge for farmers in adopting agrobiodiversity**

*“The problem in our garden is caused by the raining season which leads to flood and produce less yields and insects invasion”* (R12).

*“If the sun is too hot then most of my crops will get wither and the leaves will fall down”* (R13).

In terms of weather issues, the farmers are vulnerable due to heavy rain and hot dry season causing flood and wilted leaves since the productivity of yields also depends on the volume of rain and the temperature.

*“I have some insects on my leaf and the leaf becomes yellow”* (R16).

*“It is natural-caused problem which is pests on my leaves”* (R17).

Two respondents above mention that they have insects as kinds of pests on their leaves although they do not mention specifically on what pests interfering them.

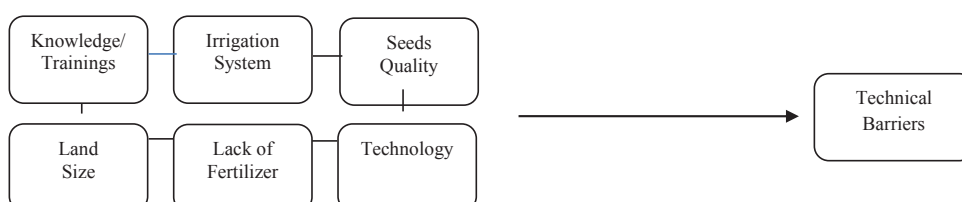
*“I have problems with the soil quality because some plants are suitable with the soil condition I have while some do not”* (R18).

*“I have bad quality of soil thus I need soil improvement”* (R19).

In terms of topography and soil quality, the study area is located nearby mountainous area which makes slopes at some garden and this condition complicates the farmers in managing the land.

(2). Technical Barriers

The technical barriers are the obstacles farmers discover related to the practical aspects.



**Figure 6. The technical barriers that become challenge for farmers in adopting agrobiodiversity**



Referring to interview results, 6 barriers are found related to lack of knowledge farmers have since half of them have trainings from the local authorities while other half has nothing to do with this issue.

*“I have bad quality of seeds and I need seeds with higher quality”* (R20).

*“I need support in good seeds”* (R21).

The respondents do not significantly mention what seeds they need or the current quality of seeds they have but they seem urgently need the better quality of seeds and this becomes the obstacles most of farmers are facing.

*“I only rely on watershed/rain harvesting technique. I do not have any irrigation system. I need a convenient irrigation system”* (R22).

The farmers in this village do not build proper irrigation system which makes them rely on the rainfall for watering their plants. They could provide water for their cattle but the crops are too many thus they count on rainfall.

*“I need larger garden so that I can plant more crops and graze more livestock”* (R24).

*“I do not have the area so I do not think about agrobiodiversity”* (R25).

The issue on land size also becomes the major problems to farmers since home garden is sort of limited in the land size which also limits the farmers in planting and building more cages.

*“I need to have new planting techniques to improve my production”* (R26).

*“I want to have new machine for assisting me in processing my production”* (R27).

The farmers find their limits in machinery tools as the researchers also see that they have limited numbers of machines in planting, harvesting, and processing their crops/cattle. Corn sheller machine is the most seen at their garden.

*“I do not have fertilizer. I grow my crops organically, but I know that fertilizer can help to accelerate the growth of crops”* (R28).

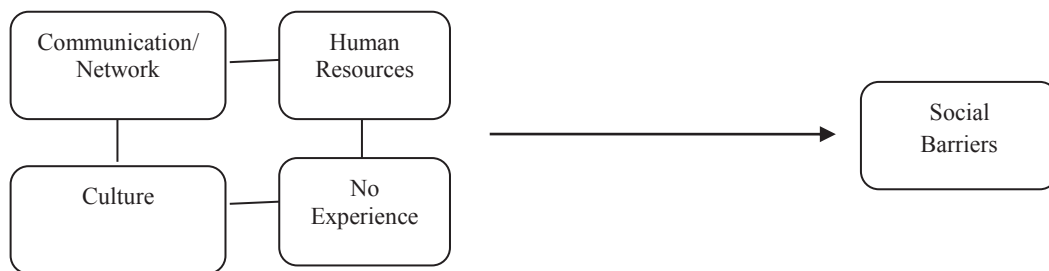
The problem with fertilizer is the major concern among other technical barriers. Agritage support farmers to maintain their home garden with fertilizer free whilst farmers have another consideration.

*“I need effective farming methods and trainings for teaching me the proper way for crops maintaining”* (R29).

Farmers tell that they are willing to adopt agrobiodiversity but they need trainings and effective methods in growing qualified plants because the trainings and seminars about cultivation techniques are still rare to them.

### (3). Social Barriers

Social barriers are related to the interaction farmers have among each other as well as the experiences they have about agrobiodiversity as shown below:



**Figure 7. The social barriers that become challenge for farmers in adopting agrobiodiversity**

*“I am too old and I do not have any interest in agrobiodiversity because I also do not have enough people to help me”* (R30).

*“I do not have many experiences in growing fruits, especially oranges”* (R31).

*“I have to focus in tourism sectors in my village”* (R32).

*“I am interested in agrobiodiversity once I have time because I am also working outside of the village”* (R33).

The statements above are made by farmers who mention that they have restriction with their age since they are too old to manage the garden by themselves. This is also related to the fact that young generation

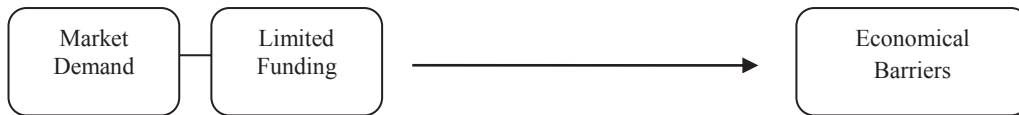
mostly spend their time to find other job instead of being farmers that make the old farmers are lacking of labors. In this study area, the home garden is limited in land size which makes the income from yields is also not enough to pay the labor.

The farmers also note that they do not have many experiences about agrobiodiversity and they need more of professionals to guide them since the working culture

they have is to serve the demands for tourisms which make the farmers focus on that single aspect whereas they also desire to develop their business.

(4). Economical Barriers

The economical barriers are the situation where farmers feel lack of capital services and lack of income due to the low market demands



*“I have lack of market demand because I consume my crops/livestock for daily needs and only sell them when the consumer asks” (R34).*

*“I need to grow more crops that are matching with the market demand to gain more benefit” (R35).*

*“I need to have stable demand” (R36).*

*“I need to have more promotion on my yields” (R37).*

Market demand is the most problem in terms of economical barriers found by the researcher after interviewing the respondents. The low demand will lead to low revenue of farmers’. This is because most of farmers only sell their yields to the tourists that come to their village and they eat mainly of their own livestock and crops.

*“I need financial support because I do not have money to buy fertilizers” (R38).*

*“I need money to buy tools, machine, and fertilizers and I have small group of cattle and I need budget to buy more” (R39).*

Aside of market demand, some group of farmers need funding to purchase more seeds, fertilizers, machines, and cattle. Comparing to funded farmers, the number of non-funded farmers is larger although they mention that there was a project of planting 25 mandarin trees in the village but they still need more than that.

**4. Discussion**

The research highlights the home garden as a successful medium for promoting sustainable agrobiodiversity practices. Farmers implementing agrobiodiversity practices reported positive outcomes in terms of garden productivity, land protection, and

environmental benefits. The successful implementation of syntropic farming in the village is evident, with significant yields of bananas and sweet leaf achieved in a limited land area [12]. This aligns with previous research highlighting the role of home gardens in agroforestry, contributing to improved livelihoods and food security [2]. Most of the 14 farmers practicing agrobiodiversity in their home gardens expressed satisfaction with the results, both in terms of income and environmental benefits. Diversifying crops offers opportunities to expand the market and provides farmers with more choices for harvesting, avoiding dependence on seasonal crops [2]. Syntropic farming enriches soil organic matter through crop residues, nourishing the soil for subsequent crops and enhancing microbial communities and soil aggregation [14]. The adoption of agrobiodiversity has been associated with improved soil health, countering the negative effects of inappropriate farming practices like monocultures and frequent tillage [14]. The combination of crops and trees in syntropic farming results in higher soil fertility compared to monocultures [9]. Additionally, this approach contributes to environmental preservation, preventing soil erosion through the strategic planting of trees along contour lines [9]. The popularity of home gardens as a means of biodiversity conservation in Vietnam can be attributed to the government’s “Renovation policies” introduced in 1986 and 1992, promoting access to markets, private land ownership, and international investment [17]. Syntropic farming within home gardens offers opportunities for valuable cash income through the sale of crops and commodities [17]. The potential for expanding syntropic farming through commercialization is evident, considering the area’s focus on serving tourists rather than commercial

sales at present [17]. Buot village exhibits all the necessary elements for successful syntropic farming, including awareness and practice among indigenous and ethnic communities, suitable land size, and a variety of crops that can be promoted to others [17]. However, certain challenges persist in developing syntropic farming, particularly concerning farm management strategies, which farmers highlighted during the interviews. The lack of experience and innovation may be influenced by the age of productive farmers and the disinterest of the village's youth in farming. Education levels also impact innovation on the fields, with most farmers having only completed primary education [10]. Education has a direct bearing on the efficiency of agricultural activities [16]. Farmers in Buot village expressed interest in understanding consumer preferences to align their crop choices with market demand. Funding for agrobiodiversity development often requires loans from banks or self-sponsorship, as government facilities primarily focus on supporting daily needs and children's education, rather than agriculture facilities [17]. Small-scale farmers encounter challenges in obtaining loans from commercial banks, which could hinder their agrobiodiversity initiatives.

## 5. Conclusion

This study explores farmers' preferences and perceptions towards agrobiodiversity adoption in Buot village. The semi-structured questionnaires, comprising open and close-ended questions, revealed that nearly half of the farmers implement agrobiodiversity practices in their home gardens. Both adopters and non-adopters face benefits and barriers, including climate-related challenges like dry seasons and heavy rain causing withered leaves and pest issues. Economic factors such as market demand and budget constraints also hinder adoption. The government's limited contribution primarily focuses on education funding for farmers' children rather than the agricultural sector. Education level and age influence farmers' decision-making in innovating their home gardens. The absence of an irrigation system further complicates matters. The study calls for further research to explore the correlation between socioeconomic data and farmers' decisions and to better understand biodiversity adoption in rural Vietnam, considering current challenges.

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