

**COMPARATIVE STUDY OF VARIOUS AGRICULTURAL FINANCIAL PROVIDERS
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ABSTRACT

Capital plays a crucial role in fulfilling the production needs of agriculture. As a hub for agricultural production, farmers in Bandung District utilize various financial providers to meet their capital requirements. However, some farmers still encounter difficulties in obtaining finance. This research aims to identify the sources of finance obtained by farmers and evaluate the benefits and risks of various financial providers. A survey was applied using proportionate stratified random sampling through the distribution of questionnaires. The questionnaire consisted of questions related to the sources of finance used by the farmers and their experiences with obtaining finance. The data obtained were analyzed using descriptive statistics, which involved summarizing and organizing the data to describe various sources of financial providers in Bandung District. The study results indicate that 61% of farmers have obtained finance from various sources. The most commonly accessed source of finance is non-bank financial providers. In terms of benefits, non-bank financial providers have the highest utility and are classified as high, while digital financial providers have the highest level of effectiveness and are classified as very high. In terms of risk, bank financial providers are the safest source and are classified as low. The key to improving farmers' access to finance and ensuring the success and sustainability of their operations is effective collaboration between the government, financial institutions, and farmers themselves.

Keywords: *agricultural finance, Bandung District, benefit, financial provider, risk*

BACKGROUND

Indonesia, as an agricultural country, possesses great potential for development in this sector. Agricultural development in Indonesia has been ongoing since pre-independence and continues to progress to this day. One of the government-implemented programs that aims to support farmers is agricultural finance. The KUR (*Kredit Usaha Rakyat*) program, in particular, offers farmers the ability to obtain loans with relatively low interest and easy conditions. Ideally, with the various agricultural financing programs in place, farmers can increase their access to credit to run their businesses. However, in reality, many farmers still face difficulties in obtaining capital. The problem of limited access to credit for farmers despite the existence of agricultural financing programs is a common issue faced by many countries, including Indonesia. There are several reasons why farmers may still face difficulties in obtaining capital, despite the presence of these programs:

1. Complex application process: Agricultural financing programs may have complex application processes that are difficult for farmers to navigate, particularly if they have limited education or financial literacy.
2. Strict eligibility criteria: Agricultural financing programs may have strict eligibility criteria that limit the number of farmers who can access these programs. For example, some programs may require farmers to have a certain level of land ownership, income, or credit history.
3. Inadequate outreach and awareness: Farmers may be unaware of the agricultural financing programs that are available to them, due to limited outreach and awareness efforts by the government and financial institutions.
4. Lack of transparency and fairness: In some cases, agricultural financing programs may not be transparent or fair in their lending practices, leading to distrust among farmers and a reluctance to participate in these programs.
5. Unaffordable terms and conditions: The terms and conditions of some agricultural financing programs may be too onerous for farmers to afford, such as high interest rates, lengthy repayment periods, and excessive fees and charges.

A significant number of farmers find it challenging to secure capital from banks due to their inability to meet the credit eligibility standards set by these institutions. The inability to meet the stringent credit refers to the situation where farmers are unable to fulfill the strict requirements that banks or financial institutions have set for granting loans or credit. These criteria may include minimum income levels, property ownership, credit history, and other factors that the bank considers when determining loan eligibility. If farmers do not meet these criteria, they may be denied access to credit and be unable to secure the capital they need to run their businesses. The strictness of these criteria can make it difficult for many farmers, particularly small-scale farmers, to obtain loans and grow their businesses. Additionally, many farmers in rural areas do not have access to the necessary financial services, which are often costly or inflexible. Mulyaqin et al. (2016) have reported that the availability of funding sources that are accessible to farmers is still limited, despite literature highlighting the importance of financing in improving farm performance. According to Feryanto (2019), agricultural financing plays a crucial role in supporting increased production, improving farmers' welfare, and promoting agricultural development. By accessing agricultural financing, farmers can increase their production and income (Yoko & Prayoga, 2019).

Conventional formal financial institutions, such as banks, are not designed to provide financial services in rural areas due to high transaction costs and the remoteness of villages and towns (Pomeroy et al., 2020). As a result, informal or semi-formal financial institutions, as well as alternative providers such as traders or input suppliers, have become the primary providers of financial services in these areas (Richter, 2011). Wulandari et al. (2017) reported that 78% of agricultural business actors in Indonesia obtained financing from sources other than banks, with only 22% of their businesses sourcing capital from banks. According to Winn et al. (2009), farmers' access to credit is still limited, which constrains the development of agricultural businesses. Traditional forms of collateral are often not available, thus limiting access to the funding needed for this sector. Meyer & Nagarajan (2000) have stated that agricultural financing is one of the essential policies for addressing poverty in rural areas and plays a significant role in agricultural development. Additionally, with the development of financial technology (fintech) as a new financial service model, developed through information technology innovation (Hsueh & Kuo, 2017), farmers have greater opportunities to obtain funding. In Bandung District, banking facilities are not easily accessible for

farmers as they are not located in rural areas and the nearest branches are quite distant. However, the proximity of NBFPP is relatively convenient for farmers, as they are within walking distance of their homes or farms. In terms of accessing DFP, most farmers in the region possess smartphones and have access to the internet with a sufficient level of connectivity.

One of the largest food and vegetable producing areas in West Java province is Rancaekek and Pangalengan in the Bandung District (BPS, 2022b). According to Puspitasari (2011), this area serves as a food buffer zone for the capital of West Java Province. BPS (2022a) has reported that 72% of potato production originates from these areas, making adequate financing crucial for producing these agricultural products. Due to the difficulties in accessing financing from traditional financial institutions, farmers in Bandung District have resorted to utilize alternative financial providers. They no longer solely rely on formal financial institutions for their financial needs. Supanggih & Widodo (2013) have reported that the majority of farmers, with small plots of land and some with moderate to large plots, choose to obtain financing from non-banks, such as cooperatives, farmers' groups, and agricultural stores. An alternative chosen by farmers is digital financing, with 20% of farmers obtaining capital from fintech companies. On the other hand, farmers who obtain financing from banks only account for 15% (Wulandari et al., 2021).

Each financial provider has its own strengths and weaknesses. The low financing sources obtained by farmers must be explored in more depth. With the various phenomena mentioned above, the purpose of this research is to describe the sources of finance obtained by farmers, along with the benefits and risks of various agricultural financial providers. The research aims to provide a comprehensive understanding of the financial landscape for farmers in Bandung District and identify potential solutions to improve access to funding for this crucial sector. By analyzing the sources of finance, their benefits, and risks, the research aims to provide recommendations that can help farmers overcome obstacles in obtaining capital and improve their access to financial services. This, in turn, can help promote agricultural development and improve the welfare of farmers in Bandung District.

This research is important because it addresses the significant challenge faced by farmers in Bandung District in accessing capital to run their businesses effectively. Despite the existence of agricultural financing programs, many farmers still face difficulties in obtaining credit due to factors such as complex application processes, strict eligibility criteria, limited outreach and awareness, lack of transparency and fairness, and unaffordable terms and conditions.

The novelty of this research lies in its comprehensive approach to analyzing the sources of finance obtained by farmers, along with the benefits and risks of various agricultural financial providers. This research provides a more in-depth understanding of the financial landscape for farmers in Bandung District and identifies potential solutions to improve access to funding for this crucial sector. By considering the sources of finance, their benefits, and risks, the research aims to provide recommendations that can help farmers overcome obstacles in obtaining capital and improve their access to financial services. This information can be used to inform policy and improve the welfare of farmers in Bandung District. Overall, this research fills a gap in our understanding of the challenges faced by farmers in accessing capital, and provides a foundation for further work to improve the financial landscape for farmers in Bandung District.

RESEARCH METHODS

The research was conducted from August to December 2022 in the Rancaekek and Pangalengan sub-districts, which are among the largest agricultural producing areas in the region and serve as food suppliers for the capital of West Java (Puspitasari, 2011). The research focuses on paddy as a representative of food crops and potatoes as a representative of horticultural crops. Food and horticulture are commodities of utmost importance for everyday human needs. Winaryo & Sugiri (2012) explain that these commodities have benefits as suppliers to industrial needs and as the main staple needs for human beings. The position of these commodities is also highly strategic in maintaining the nation's food security.

This research employs a quantitative approach, utilizing a survey method to collect data. The data collected includes the characteristics of financial institutions, the social and economic conditions of farmers, and access to financing. The population of this research is all farmers who are members of farmer groups in Rancaekek and Pangalengan, Bandung District. The farmer groups in Rancaekek Sub-District consist of Mekar Tani Jaya, Sejahtera, Suka Hati and Rancamanyar. As for the farmer groups in Pangalengan Sub-District, they are Banyu Rahayu, Muda Berkarya, Berkah Tani, Tanagi, Mandiri Farm and Wargi Setia. Sample selection is done randomly using the proportionate stratified random sampling method. Regarding the sample selection, 100 farmers were selected to be the study respondents. The type of data used in this research is primary data. Primary data was obtained through interviews using a questionnaire survey. To answer the problem about various agricultural financial providers obtained by farmers, and the benefits and risks, the data were analyzed using descriptive statistics.

RESULT AND DISCUSSION

Sources of Finance Obtained by Farmers

The availability of financing sources is a critical factor for farmers to carry out their farming activities. Financing is required to meet various production-related needs such as seeds, fertilizers, pesticides, farming tools, among others. Additionally, financing is also necessary to meet operational needs such as transportation and marketing of agricultural products. Farmers in Bandung District have access to three main financial sources, namely Bank Financial Providers (BFP), Non-Bank Financial Providers (NBFP), and Digital Financial Providers (DFP).

BFP includes conventional and sharia banks, which offer loans with relatively low-interest rates and long repayment periods. These loans can be beneficial for farmers as they can help them obtain the capital they need to run their businesses effectively. However, the requirements for loan applications are quite stringent and complex, making it difficult for some farmers to access these loans. For example, many BFP require collateral, such as property or assets, to secure the loan. This requirement can make it difficult for small-scale farmers who may not have sufficient collateral to meet the loan application criteria. In addition to collateral, BFP also require a number of other documents to be prepared in order to apply for a loan. This can include financial statements, business plans, and other documentation that can be time-consuming and difficult for farmers to prepare. The stringent and complex application requirements of BFPs can discourage farmers from seeking loans and limit their access to credit. Furthermore, Hastuti & Supadi (2005) note that the banking system is less supportive of the development of the agricultural sector. This minimal support is reflected in

relatively complex loan procedures, particularly for agribusiness and agroindustrial entrepreneurs. Therefore, while BFPs offer low-interest rates and long repayment periods, the complex application requirements can pose significant challenges for farmers in accessing loans from these institutions. NBFP, includes cooperatives, farmer groups, family, neighbors, relatives, agricultural stores, moneylenders, among others, can also be accessed by farmers to obtain funds (Thaker et al., 2020; Wulandari et al., 2021). These financial sources have more comfortable requirements and more flexible repayment periods compared to BFP. However, the funds offered by NBFP are usually not as substantial as those offered by BFP. NBFP in Bandung District are alternative sources of finance for farmers. These sources typically have more relaxed requirements and more flexible repayment periods compared to BFP. This can make it easier for farmers to access capital, even if they do not meet the stringent eligibility criteria set by BFP. However, the funds offered by NBFP are usually not as substantial as those offered by BFP. This can limit the ability of farmers to secure the capital they need to run their businesses effectively, especially for larger-scale operations. It is important to note that while NBFPs offer more relaxed requirements and flexible repayment periods, they may come with higher interest rates and shorter repayment periods compared to BFP. This can increase the cost of borrowing for farmers and make it more difficult for them to repay their loans.

Different from non-digital-based financial providers, DFP, such as peer-to-peer lending, digital credit, and pay later in fintech, can also be accessed by farmers to obtain funds with an easier and faster process. DFP offer an alternative to traditional, non-digital-based financial providers for farmers in Bandung District. Unlike traditional financial providers, DFP can offer more benefits. Furthermore, online loans offer various advantages such as flexibility, credit calculators, and a wide range of products (Santi, 2019). For example, in peer-to-peer lending, farmers can apply for a loan directly from individual lenders without having to go through a traditional financial institution. This can significantly reduce the time and effort required to obtain a loan and increase access to capital for farmers. In addition, the eligibility criteria set by DFP may be less stringent compared to traditional financial providers, making it easier for farmers to secure funding. The online application process can also make it easier for farmers to apply for loans, even if they are located in remote or rural areas where access to traditional financial institutions is limited. However, it is important to note that while DFP can offer an easier and faster process for obtaining funds, these financial providers usually have higher interest rates compared to BFP. Additionally, as the digital financial sector is still relatively new, there may be risks associated with using DFP that farmers should be aware of. This is because DFP operate differently than traditional financial institutions and may not have the same level of regulatory oversight or financial stability. This can result in higher interest rates being charged to borrowers to compensate for the added risk. DFP may not have access to the same low-cost funding sources as traditional financial institutions, which can also contribute to higher interest rates for borrowers.

It is important for farmers in Bandung District to consider the interest rates offered by different financial providers and weigh the potential benefits and risks before deciding which financial provider to use for their financing needs. By comparing the interest rates offered by various financial providers and carefully considering the terms and conditions, farmers can make an informed decision that is best for their specific financial situation. Figure 1 shows access to finance of farmers in the Bandung District.

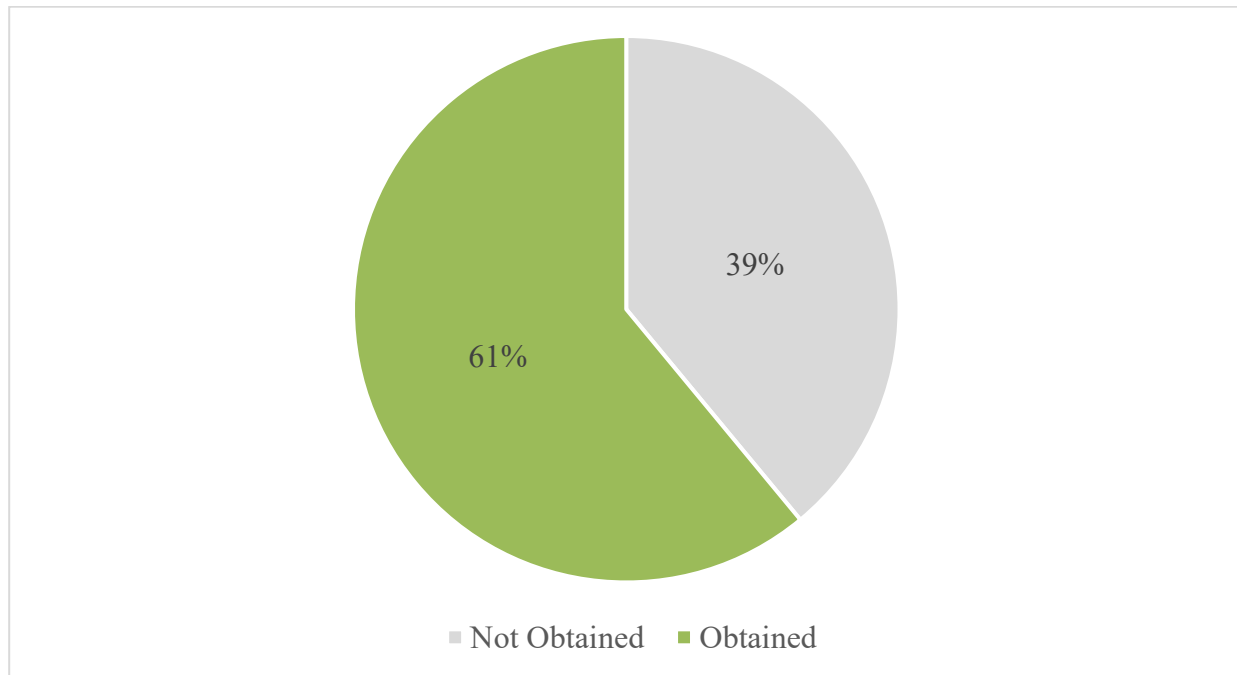


Figure 1. Access to Finance of Farmers in Bandung District

From Figure 1, 39% of farmers in the Bandung District did not obtain financing. This highlights that there is still a significant number of farmers who face difficulties in running their farming activities due to limited access to financing. Here are the reasons why these farmers are unable to obtain financing:

1. Inadequate collateral: Farmers may not have sufficient assets to serve as collateral for a loan, which can make it difficult for them to meet the credit eligibility criteria set by financial institutions.
2. Limited financial literacy: Farmers may not understand the loan application process, the credit eligibility criteria, or the terms and conditions of the loan. This can make it difficult for them to obtain financing, even if they are otherwise eligible.
3. Complex requirements: The loan application process for conventional and sharia banks, for example, may require the submission of numerous documents and other materials, which can be difficult for farmers to prepare.
4. Lengthy processing times: The loan application process can be time-consuming, taking several weeks or even months to complete. This can create obstacles for farmers who need funding quickly to support their operations.
5. Strict credit eligibility criteria: Financial institutions may have strict credit eligibility criteria that farmers must meet in order to obtain a loan. This can include requirements such as minimum annual income, minimum collateral value, and other criteria that can be difficult for farmers to meet.
6. Lack of transparency: Farmers may not understand the loan application process, the credit eligibility criteria, or the terms and conditions of the loan, making it difficult for them to determine whether they are eligible for financing.
7. High interest rates: Farmers may be discouraged from obtaining financing if the interest rates charged by financial institutions are perceived to be too high.

Moreover, farmers still face challenges in obtaining loans from banks due to the complicated application procedures (Supriatna, 2009). The implication is the limited access of farmers to the production factors required to run farming activities. Furthermore, challenges still exist in efforts to achieve food security through food access due to the limited ability of farmers to obtain financing (Muhtarom et al., 2021).

Without sufficient financing, farmers have difficulty in purchasing seeds, fertilizers, pesticides, farming tools and so on. Adequate financing is critical for farmers to invest in the resources and materials they need to operate their businesses effectively. Without sufficient financing, farmers face a number of challenges that can limit their ability to produce crops, manage pests and diseases, and maintain the quality of their land. Here are a few ways in which limited financing can impact farmers:

1. **Inadequate resources:** Farmers need to purchase a range of inputs to grow crops, such as seeds, fertilizers, and pesticides. Without sufficient financing, they may be unable to purchase these inputs, which can reduce the yield and quality of their crops.
2. **Poor land management:** Farmers also need financing to purchase tools and equipment for land management, such as tractors, plows, and harvesters. Without these tools, farmers may be unable to effectively manage their land, which can result in soil degradation, reduced crop yields, and lower profits.
3. **Increased risk:** With limited financing, farmers may be forced to purchase lower-quality inputs or rely on informal or informal loan sources, which can increase the risk of financial losses. In some cases, farmers may also have to take on additional debt to cover their expenses, which can create a cycle of debt and further limit their ability to grow their businesses.

Furthermore, the limited access to financing can also affect the quality and quantity of agricultural products. Mulyaqin et al. (2016) explains that the larger the area of land that is worked by farmers, the greater the effort that farmers need to take advantage of the available capital sources. Unavailable financing can also affect the welfare of farmers and their families. Farmers who do not get financing may have difficulty to fulfill the economic needs of their families such as food, clothing, education, and health.

Lack of financing can have serious consequences for farmers and their families. With no access to funding, farmers may struggle to afford basic necessities like food, clothing, education, and health care. This can result in a downward spiral of poverty and financial hardship for families that rely on agriculture for their livelihoods. It's important to note that farming is not just a job, but also a way of life for many families, and a lack of financing can have devastating effects not just on their economic well-being but also on their overall quality of life. This highlights the critical importance of improving access to financing for farmers in Bandung District and helping them overcome the barriers they face in securing capital.

Problems often faced by farmers in obtaining financing include difficulty in providing collateral, lack of access to information, or difficulty in the loan application process. Farmers who have limited land and are cultivators or smallholder farmers usually have difficulty providing collateral in the form of land and building certificates, making it difficult to access loans from banks. In addition, the time for loan repayment offered by banks is usually monthly, which is not in line with the characteristics of agricultural businesses that have seasonal harvest periods. In Bandung District, the majority of farmers hold land of less than 0.5 hectares, which is below the minimum requirement of 0.5-1 hectares for loan application purposes. A significant barrier to access to loan programs is the

farmers' lack of understanding of the available options and the application process. This is further exacerbated by the requirement of collecting various necessary documents and supporting files, many of which farmers may not possess, such as land certificates, business license certificates, NPWP (tax identification number), etc. The formal, complicated, and time-consuming loan application procedures and transportation and administrative costs also become obstacles for farmers to access loans from banks (Ashari & Friyatno, 2006; Hastuti & Supadi, 2005; Nurmanaf, 2007). Therefore, this research aims to compare the various agricultural financial providers and assess the benefits and risks of each provider to help farmers make informed decisions about their financing options.

To address these issues, effective collaboration between government, financial institutions, and farmers is crucial. The government should work closely with financial institutions to develop funding programs that meet the specific needs of farmers. Financial institutions, in turn, should collaborate with the government to provide education and training for farmers, equipping them with the knowledge and skills needed to apply for loans and effectively manage their businesses. The government has attempted to improve the financial accessibility of farmers through the KUR program. This initiative is aimed at providing small to medium enterprises, including farmers, with low-interest financing. Despite its potential benefits, the program's implementation remains challenging, and farmers still face difficulties accessing it. Additionally, there is a significant lack of information provided to farmers regarding the financial services that are available to them, leading to a deficiency in their knowledge and understanding of these services. This undermines the efforts made by the government and financial institutions to increase the financial inclusivity of the agricultural sector. Research by Wulandari et al. (2017) suggests that access to capital is closely linked to farmers' knowledge of funding sources, which is in turn influenced by factors such as farming experience and prior experience obtaining funding (Akmal & Wulandari, 2022). Furthermore, the frequency with which farmers access capital has been found to impact agricultural productivity (Mudiyono & Hariadi, 2012; Supanggih & Widodo, 2013). By considering these factors, it is hoped that farmers will have access to adequate funding to carry out their farming activities effectively.

The limited access to funding faced by farmers in Bandung District highlights the need for continued efforts to improve farmers' welfare and agricultural productivity. The government must take action and work closely with financial institutions and communities to create funding programs that meet the specific needs of farmers and provide the necessary education and training support. Financial institutions, for their part, should provide easy and accessible funding options for farmers. To effectively address the challenges faced by farmers in obtaining financing, the government, financial institutions, and communities can take the following proposed steps:

1. Development of tailored funding programs: The government can work with financial institutions to create funding programs specifically designed to meet the needs of farmers. These programs can include low-interest loans, long repayment periods, and relaxed collateral requirements.
2. Education and training support: The government and financial institutions can collaborate to provide education and training to farmers on financial management, loan application processes, and business management. This will equip farmers with the skills and knowledge they need to successfully manage their businesses.
3. Easy and accessible funding options: Financial institutions can simplify the loan application process, reduce the required documentation, and provide flexible repayment options. They can also use digital platforms to make funding more accessible to farmers.

4. Collaboration with farmer communities: Financial institutions can engage with farmer communities to understand their financing needs and develop solutions that address their challenges. This can include the creation of community-based financing programs and the establishment of farmer-owned cooperatives.
5. Improved access to information: The government can work to improve access to information on funding options for farmers, including information on interest rates, collateral requirements, and loan application processes.

The aim of these initiatives is to provide better access to finance for Indonesian farmers, particularly in the Bandung District, and to encourage sustainable agricultural development. Additionally, farmers should take steps to improve their business management skills and financial literacy, which will help them to effectively apply for loans and plan for their financial future (Fitriani, 2018). Furthermore, research by Febriyanto et al. (2019) suggests that access to financial information can help open up funding opportunities.

Supriatna (2009) formulated a suitable funding model for food and vegetable farmers, which includes flexible cash credit for self-management according to farming needs, short-term credit with payment after harvest, an interest rate that is accessible to farmers, and credit limits suitable for seed, fertilizer, and medicine procurement costs. Additionally, credit should be submitted and disbursed through farmer groups, with the goal of reducing costs and providing guidance for loan management and farmer business. It is also important to avoid using land certificates as collateral and instead use sanctions of joint responsibility similar to micro-business credit or delay/rescheduling of payment time.

The use of land certificates as collateral can be a challenge for farmers in the Bandung District. Farmers who do not have land certificates may find it difficult to obtain financing from BFP, as these financial providers often require land certificates as collateral. This requirement can limit the access of farmers to financing, especially smallholder farmers who do not have a significant amount of land. The situation is different for NBFP and DFP. These providers usually have more relaxed requirements compared BFP, and may not require land certificates as collateral. However, the funds offered by NBFP and DFP are usually not as substantial as those offered by BFP. Farmers realize that their income is not fixed and cannot be predicted, therefore if they have to use their land certificate and the income they have cannot pay credit every month, it can lead to the confiscation of their only assets. Therefore, most farmers avoid getting financing from BFP and prefer other sources even though the interest rates are higher

Ultimately, with adequate access to financing and the right support, it is expected that farmers in Bandung District will be able to increase agricultural productivity and improve the economic well-being of their families. People with a good level of financial literacy tend to be more interested in using financing and insurance in the agricultural sector to protect their business activities (Fahlevi SI et al., 2021). Financial literacy refers to an individual's knowledge and understanding of financial concepts, such as budgeting, saving, investing, and risk management, as well as their ability to apply this knowledge to make informed decisions about their finances. In this study, farmers with a good level of financial literacy are those who possess this knowledge and understanding, and are therefore more interested in using financing and insurance in the agricultural sector to protect their business activities. Regarding Figure 1, 61% of farmers in Bandung District successfully obtained financing from various sources.

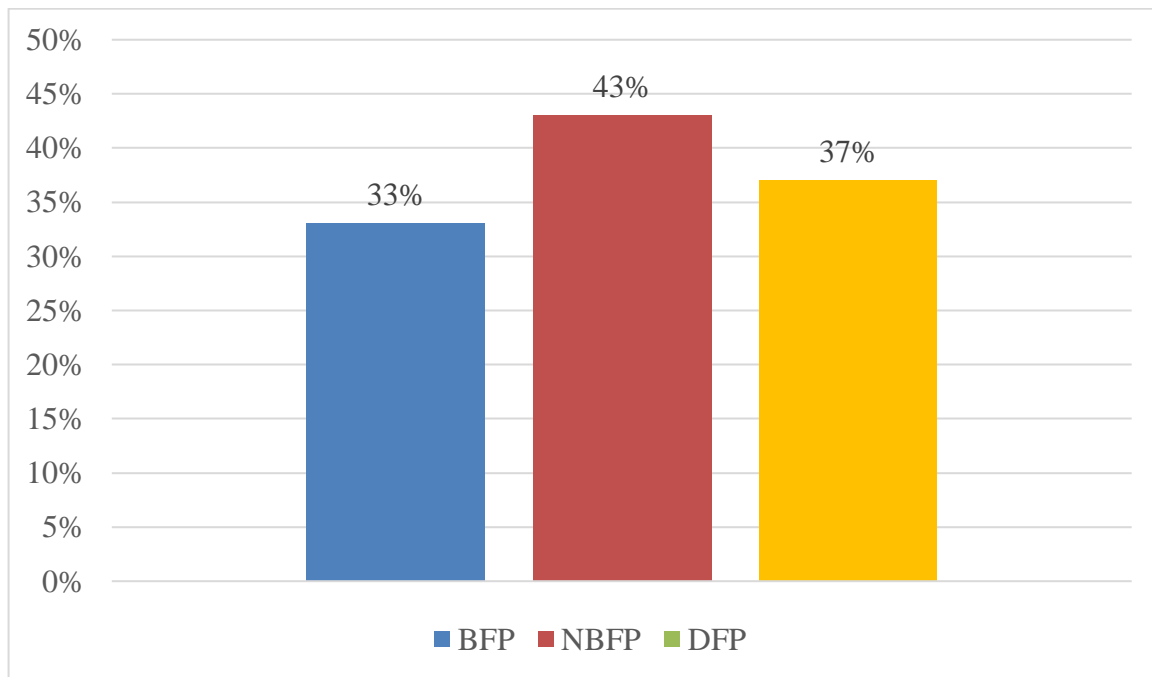


Figure 2. Sources of Financial Providers Obtained by Farmers in Bandung District

Regarding Figure 2, it can be inferred that the most prevalent source of financing for farmers in Bandung District is Non-Bank Financial Providers (NBFP) at 43%. The majority of farmers obtain financing from relatives, siblings, and neighbors. Additionally, some farmers also obtain financing from kiosks, government or farmers groups, and traders, while others obtain financing from sharia-based microfinance institutions, pawnshops, and conventional microfinance institutions. The reason for this could be due to various factors. Firstly, NBFP may offer more flexible loan requirements and repayment terms compared to BFP. This can make it easier for farmers to obtain financing, especially those who may have difficulty providing collateral or who have limited access to information. Secondly, some farmers may prefer to obtain financing from relatives, siblings, and neighbors, who they know and trust, rather than from formal financial institutions. Furthermore, some farmers may also prefer financing from sources such as kiosks, government or farmer groups, and traders, who they feel have a better understanding of their needs and are more accessible. Additionally, some farmers may choose to obtain financing from sharia-based microfinance institutions or pawnshops, as they align with their personal beliefs and values. This research result is consistent with (Sartika & Karyani, 2018) which found that non-formal financial institutions (including NBFP) are the most commonly accessed sources.

The primary reason for farmers in Bandung District to prefer obtaining financing from NBFP is their affordability and flexibility in the loan application process. These sources tend to be more accessible and have a less rigorous loan application process compared to banking institutions. Furthermore, financing from NBFP is also more flexible in terms of payment terms and loan amount. However, it should be noted that financing from NBFP also carries risks that must be considered, such as higher interest rates associated with higher risk.

Supanggih & Widodo (2013) explain that farmers with small plots of land (<0.5 ha) and medium plots (0.5-1 ha) choose NBFP as their source of financing. This source comes from cooperatives, farmer groups, and agricultural stores. These results align with this research, as the majority of farmers in Bandung District have land less than one hectare. Aisah & Wulandari (2020)

reveal that farmers choose to access capital from agricultural kiosks because of the simple procedures, low interest rates, and locations close to their homes and farms. Furthermore, the provision of capital is based on personal relationships between the kiosk owner and the farmer accessing the capital.

Another alternative source of financing obtained by farmers is Digital Financial Providers (DFP) at 37%. This indicates that a considerable number of farmers in Bandung District are utilizing technology to obtain financing. Digital financial services have various innovations in the products they offer, such as digital credit products and pay-later products from online applications or platforms. The majority of farmers use digital credit as a source of digital financing, such as Kredivo, Indodana, Julo, etc. Meanwhile, some pay later service providers include Shopee PayLater, GoPay PayLater, Akulaku PayLater, etc. and some examples of peer-to-peer lending providers are AdaKami, Kredit Pintar, KrediFazz, etc.

The main reason why farmers in Bandung District prefer to obtain financing from DFP is the ease of accessibility and faster processes compared to other sources of financing. Applications or digital platforms can be accessed through smartphones, making it convenient for farmers to apply for loans without having to visit a branch office. Additionally, the application and data verification process is relatively faster when compared to traditional banking or other financial institutions. DFP is considered to have added value as it does not require collateral and can disburse loans in the form of goods or cash (Pratiwi et al., 2020). Septiani et al. (2021) also noted that farmers' interest in adopting digital financial services in West Java is influenced by hedonic motivation factors, value, and habit.

However, it is important to note that DFP also has risks to consider, as some companies or digital platforms may not be registered with the Financial Services Authority (OJK) and thus may not have clear regulations. Therefore, farmers must be cautious in choosing DFP. The government and financial institutions need to collaborate to provide safe and reliable digital financing options for farmers, as well as to provide education on risk management and good financing management practices.

The source of financing that is least obtained by farmers in the Bandung District is from BFP, with a percentage of 33%. This indicates that a relatively small number of farmers in the district obtain financing from this type of financial provider, which can include both conventional and sharia banks.

The main factor that hinders farmers from obtaining financing from BFP is the stringent requirements that must be met in order to apply for a loan. Banks typically demand collateral, guarantees, and a large amount of documentation before providing funding, which can be a significant obstacle for farmers who lack sufficient collateral or guarantees. Additionally, the credit analysis and verification processes carried out by banks are often more rigorous compared to other financial providers, resulting in longer waiting times. The lack of interest among farmers in utilizing credit is attributed to the lack of collateral for land certificates and the mismatch between monthly credit payments and farming operations that follow seasonal production cycles. Additionally, the credit available is limited in both quantity and value, making it insufficient to cover the economic needs of farming (Fadmawaty et al., 2021). Furthermore, some farmers may avoid financing from commercial banks due to fear of debt and difficulty in paying off the loan (Karyani & Akbar, 2016; Supanggih & Widodo, 2013). However, it is worth noting that financing from BFP also has its advantages. Lower interest rates and longer repayment periods can result in a lighter burden for farmers.

Furthermore, government support in the form of regulations and incentives can also help farmers access financing from commercial banks. The government can work in partnership with banks to provide financing programs that are suitable for the agricultural sector and improve farmers' access to loans. Farmers have access to a range of financing options, including BFP, NBFP, and DFP. The interest rate offered by BFP is relatively low, averaging between 3-7% per annum or 0.25-0.41% per month. On the other hand, NBFP have a much broader range of interest rates, which can range from zero interest if borrowing from family or friends to a staggering 42% when borrowing from moneylenders, per month or season. Meanwhile, DFP tend to offer an interest rate that ranges from a maximum of 0.4% per day or 12% per month.

It is important to note that the interest rates offered by these different financial providers can greatly impact the financial burden placed on farmers. While BFP offers a lower interest rate and longer repayment period, the loan application process can be difficult for farmers who may not have sufficient collateral or face challenges in providing the necessary documentation. On the other hand, NBFP may offer more flexible repayment options but come with significantly higher interest rates. DFP, on the other hand, may offer an attractive interest rate and accessibility but also carry the risk of higher fees and charges.

Benefits of Various Financial Providers

Farmers who have obtained financing from various sources, including BFP, NBFP, or DFP, will have greater freedom in managing their agricultural businesses. They can easily and quickly purchase various production factors, such as seeds, fertilizers, pesticides, agricultural tools, etc. Financing can also be used to meet operational needs, such as transportation and marketing of agricultural products. As a result, farmers who receive financing can increase productivity and efficiency in their agricultural businesses, thereby increasing their income and welfare.

It's important for farmers to be aware of principles of credit management as noted by Richardson et al. (1982) to effectively use credit, such as: 1) using credit for productive purposes, 2) avoiding borrowing from unknown funding institutions, 3) using credit for the highest income-generating activities with reasonable risk, 4) keeping records of agricultural business for objective analysis of credit needs, 5) considering the ability to repay credit from the business being conducted, 6) selecting appropriate credit sources according to needs and 7) maintaining integrity in the credit management process. By using credit wisely, farmers can avoid problems with inappropriate use of credit and can benefit from the financing obtained.

Farmers who do not receive financing will experience difficulties in running their agricultural businesses. Without access to funding, farmers may have to rely on personal funds to meet the needs of production factors. This can make it difficult for farmers to manage their agricultural businesses and decrease productivity and efficiency. Additionally, difficulties in meeting operational needs such as transportation and marketing of agricultural products can result in low selling prices of agricultural products, making it difficult for farmers to obtain adequate income.

A farmer who does not have access to sufficient financing may have difficulty in purchasing necessary inputs for their farming activities such as seeds, fertilizers, pesticides, and farming tools. This can lead to lower yields and reduced productivity, making it difficult for the farmer to meet their operational needs such as transportation and marketing of their agricultural products. As a result, the farmer may have to sell their products at low prices, making it difficult for them to obtain adequate income to support themselves and their families. For example, a farmer in Bandung District who lacks

access to financing may have to rely on selling their produce at local markets where prices are often low, reducing their overall income. Additionally, the farmer may have difficulty in buying transportation equipment to transport their produce to other markets where prices are higher, further reducing their potential income. The result is a vicious cycle in which the lack of financing leads to lower productivity, lower income, and further difficulty in obtaining financing.

To measure the benefits of various agricultural financial providers, one way is to examine their usefulness for farmers. A comparison of the usefulness of various agricultural financial providers is presented in Figure 3.

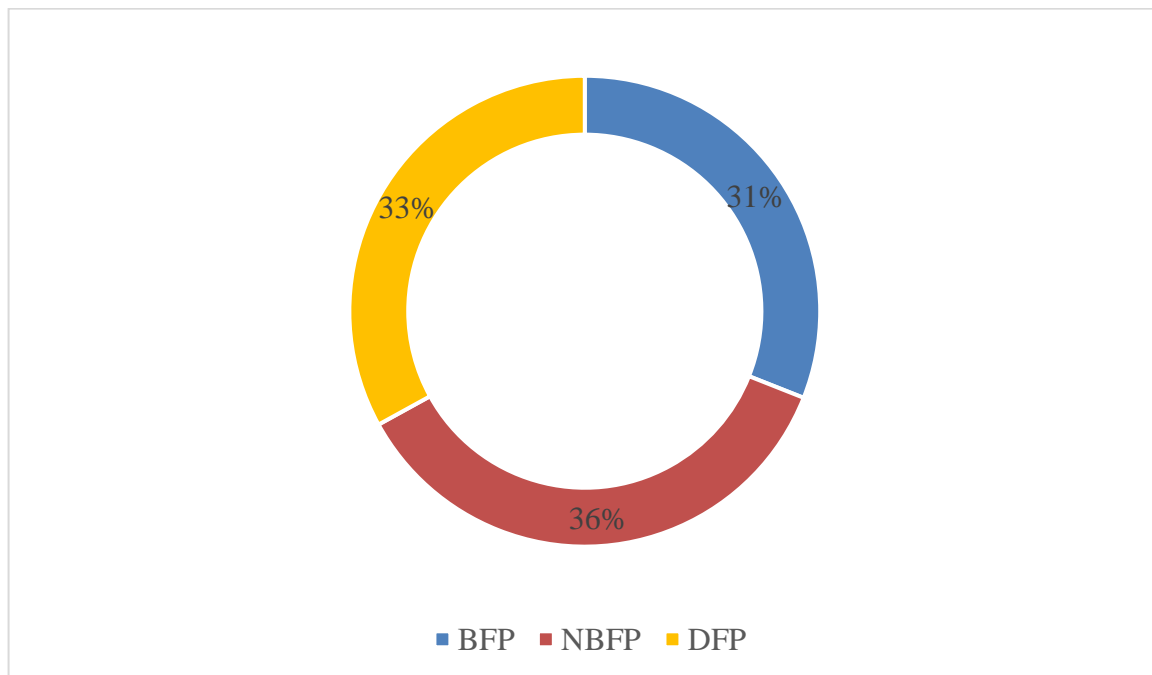


Figure 3. Comparison of the Usefulness of Various Agricultural Financial Providers

As shown in Figure 3, it can be seen that NBFP have the highest acquisition rate with a percentage of 36%. The next highest acquisition rate is for DFP at 33%. BFP has the lowest acquisition rate among other sources, at 31%. For farmers, NBFP are the most convenient source of funding compared to others due to their easy-to-use services and relatively easy-to-understand requirements. These are financial institutions that offer various types of financial services and products to customers, but are not regulated as banks. They provide an alternative source of financing for individuals and businesses, including farmers, who may not meet the requirements or face difficulties in obtaining loans from traditional banks. NBFP are known for being more accessible, convenient, and less bureaucratic. They usually have lower barriers to entry and offer quicker loan disbursement processes with fewer documentation requirements. They may also provide loans without the need for collateral and offer flexible repayment options, which is particularly beneficial for farmers who may have unpredictable cash flows. Due to these reasons, many farmers in the Bandung District choose to obtain financing from NBFP over other sources. Damayanti et al. (2019) explains that the credit distribution procedure for agricultural financing from NBFP begins with a credit application, followed by credit analysis or assessment, credit decision, disbursement of credit, and credit administration.

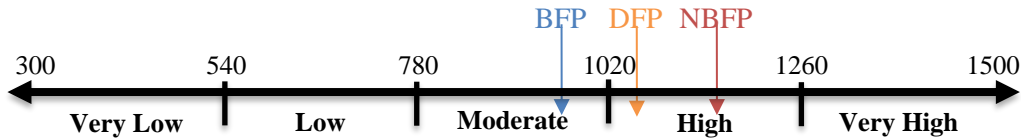


Figure 4. Spectrum of Usefulness Levels for Various Agricultural Financial Providers

Figure 4 presents a spectrum of usefulness levels for various agricultural financial providers. Based on this figure, it can be concluded that the level of usefulness of NBFP and DFP is high. On the other hand, BFP falls into the moderate category. This is because NBFP and DFP have relatively high ease in terms of services and requirements. They typically have simpler and lighter application and requirement processes compared to BFP. These institutions are also more flexible in providing loans with relatively small amounts that are appropriate for farmers' needs. In addition, the verification and approval processes for funding are also generally faster compared to banks.

BFP have a moderate level of usefulness, but this source has relatively strong guarantees, making it reliable for farmers in the long term. Banks also provide funding in larger amounts compared to micro-financial institutions or online loan companies. However, the required requirements tend to be stricter compared to NBFP and DFP. Farmers must meet the requirements set by banks, such as guarantees and documents that must be completed. Additionally, the verification process for funding is also generally longer compared to other financial providers.

To measure the benefits of various agricultural financial providers, one way is to examine their effectiveness for farmers. A comparison of the effectiveness of various agricultural financial providers is presented in Figure 5.

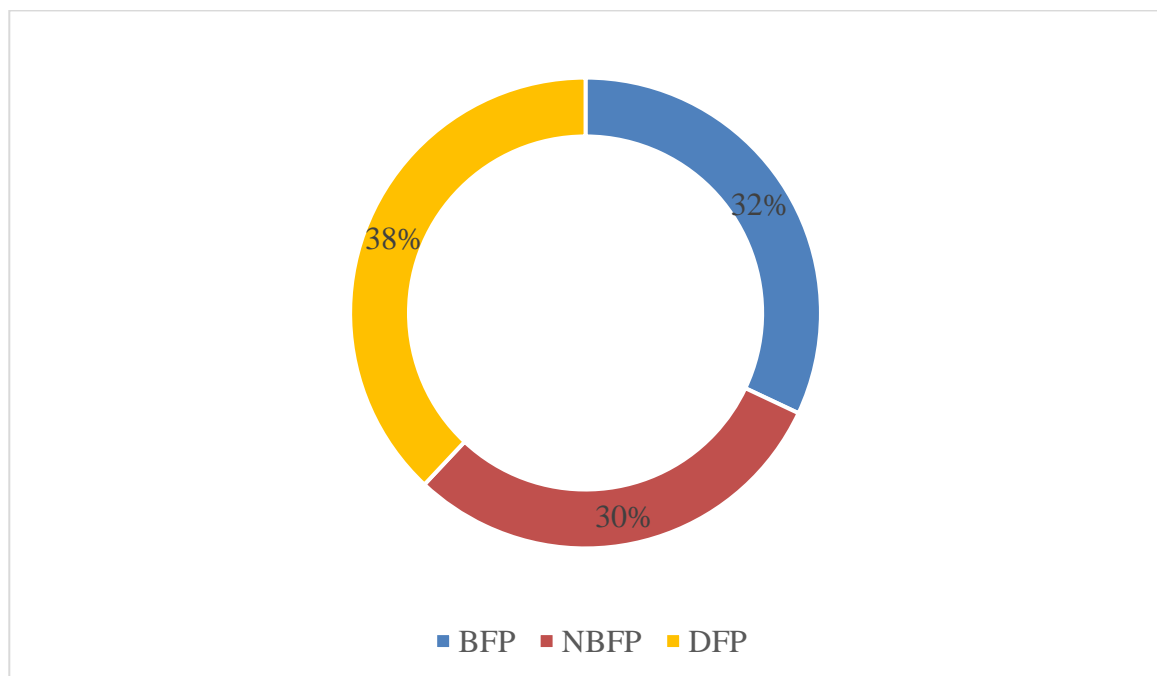


Figure 5. Comparison of the Effectiveness of Various Agricultural Financial Providers

As shown in Figure 5, it can be seen that DFP have the highest acquisition rate with a percentage of 40%. The next highest acquisition rate is for NBFP at 38%. BFP has the lowest acquisition rate among other sources, at 32%. For farmers, DFP are the most effective source of

funding compared to others due to their fast, efficient and easy-to-use services, and relatively easy-to-understand requirements.

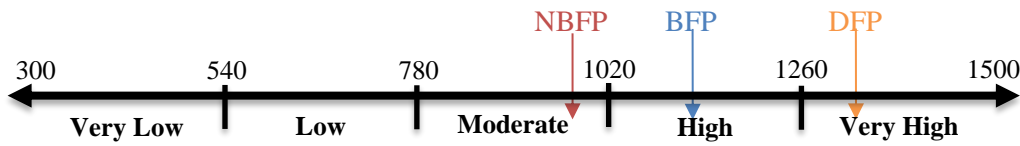


Figure 6. Spectrum of Effectiveness Levels for Various Agricultural Financial Providers

Figure 6 illustrates a spectrum of effectiveness levels for various agricultural financial providers. From this figure, it can be deduced that DFP possesses a very high level of effectiveness at 86%, while BFP falls into the high category at 74% and NBFP falls into the moderate category at 68%. This is attributed to the high level of data accuracy, speed of process, and wide range of services offered by DFP.

The benefits of each financial provider based on usefulness and effectiveness aligns with the ratings given by farmers. Most farmers rank NBFP as 1, DFP as 2, and BFP as 3 in terms of ease. In terms of effectiveness, farmers generally rank DFP as 1, BFP as 2, and NBFP as 3.

Risks of Various Financial Providers

The risks associated with various financial providers can be viewed from different perspectives such as the safety of transactions, ease of use, and potential for human error. A comparison of the risk of various agricultural financial providers is presented in Figure 7.

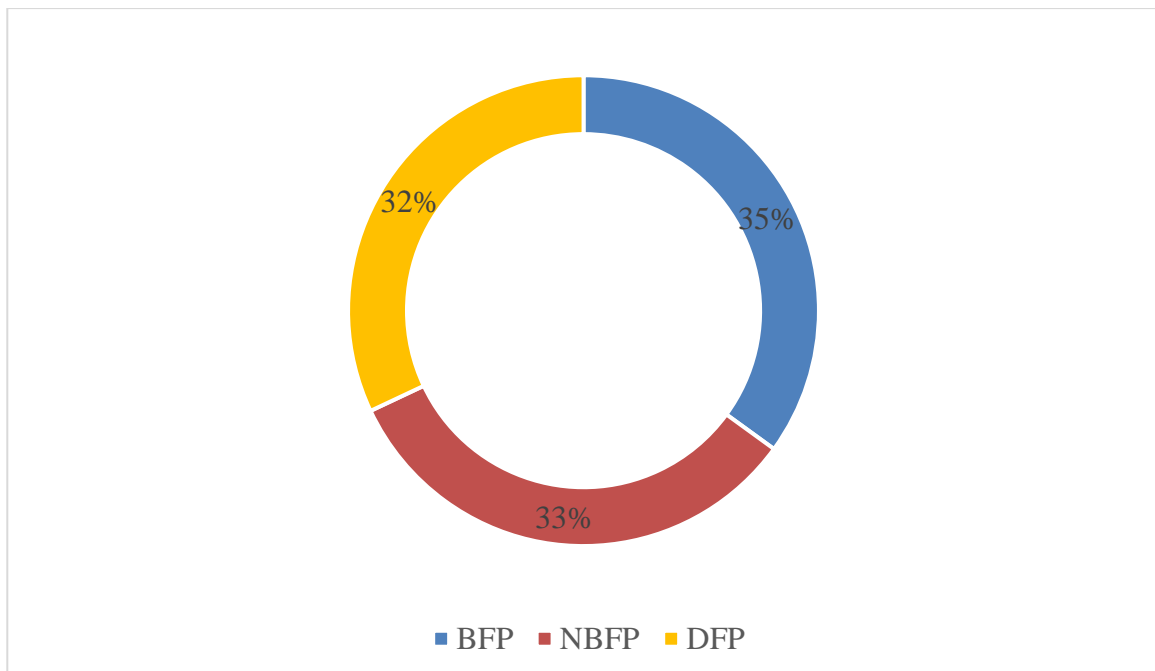


Figure 7. Comparison of the Risk of Various Agricultural Financial Providers

As per Figure 7, BFP has the highest acquisition rate at 35%, followed by NBFP at 33%, and DFP at 32%. Farmers in Bandung District consider BFP to be the source of funding with the lowest level of risk or in other words the safest. This is because banks are considered to have very high secu-

urity in transactions. In addition, if there are human errors, it is considered safe especially when compared to other sources.

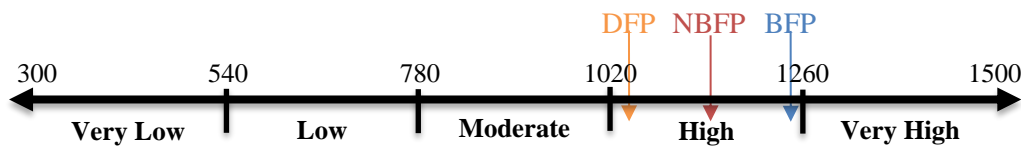


Figure 8. Spectrum of Risk Levels for Various Agricultural Financial Providers

Figure 8, which displays a spectrum of risk levels for various agricultural financial providers, demonstrates that all three sources of financing (BFP, NBFP, and DFP) fall under the category of low risk at 80%, 77%, and 75% respectively. This implies that these sources of financing are considered safe for financial disbursement activities. However, farmers perceive DFP to have a lower risk level compared to NBFP, while BFP remains the safest.

BFP is considered low-risk due to their ability to offer good guarantees, clear regulations, and strong protection systems for customers. DFP, despite its fast and easy process, is considered to have a moderate risk level as it may not always have enough guarantees and there is a risk of data privacy. NBFP is considered to have a higher risk level as it is not always reliable in terms of guarantees and security, and often lacks clear regulations and is based on mutual agreements.

Farmers may have difficulty paying for financing obtained if they experience crop failure. Roessali et al. (2022) explains that agricultural insurance is a form of financing that aims to protect farmers from risks associated with climate change. This insurance scheme allows farmers to convert uncertain events into a definite plan for protection. Therefore, agricultural insurance is essential in minimizing risks. In addition, farmers can increase their income by keeping records of their farming activities. This is supported by Wulandari et al. (2023) who found that by properly managing their farm finances, farmers can significantly increase their income. Furthermore, farmers with access to finance can achieve optimal income. As income increases, the likelihood of farmers defaulting on payments decreases. Additionally, the implementation of innovation and technology will benefit farmers as farming operations are subject to many risks that have the greatest impact on financing and crop yields (Nurcahya, 2021).

CONCLUSION AND SUGGESTION

The majority of farmers in Bandung District have obtained financing, in which 39% of farmers did not obtain financing. The most commonly used source of financing among farmers is non-bank financial providers (NBFP), accounting for 43% obtained from kiosks, government or farmer groups, and traders. Additionally, 37% of farmers used digital financial providers (DFP) obtained from digital credit and pay later, and 33% of farmers used bank financial providers (BFP) from conventional and sharia banks. In terms of benefit, NBFP and DFP have high levels of usefulness, while BFP is considered moderate. In terms of effectiveness, DFP has a very high level of effectiveness, BFP is considered high, and NBFP is considered moderate. In terms of risk, all three sources of financing are considered low. However, when ranked by safety, BFP is considered the safest, followed by NBFP and DFP.

In order to improve the financial situation of farmers in Bandung District, it is important for financial institutions, the government, and farmers to take practical actions. Financial institutions can play a major role in helping farmers access funding by offering low-interest loans specifically designed for their needs, with flexible repayment options. They can also provide educational resources to farmers on effective financial management and offer agricultural insurance to protect them against production losses. Additionally, partnerships with local organizations can help farmers understand the loan application process and increase their chances of approval.

The government can support farmers' access to financing by providing tax incentives for financial institutions that offer loans to farmers, establishing a guarantee fund for farmers who are unable to provide collateral for loans, and partnering with financial institutions to provide training and education to farmers on loan application and business management. Furthermore, the government can set up an agricultural loan disbursement program that allows farmers to access funding easily.

For farmers, getting involved in business management training and financial literacy programs can improve their chances of loan approval and effective management of their businesses. They can also join farmers' groups to increase their bargaining power and access to financing, research and compare different financing options available, including interest rates, repayment terms, and insurance options, to find the best option for their needs, and practice good financial management, prioritizing the use of financing for essential production needs to minimize the risk of default.

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