***Original Research Article***

# Economic mapping of fish farming communities in Cikancung Village, Cikancung District, Bandung Regency


## ABSTRACT

This research aims to compile economic mapping of fish farming communities and the economic factors that influence fisheries development in cikancung village, cikancung district, bandung regency. This research method is a survey method. This research was carried out from july 2023 – aug 2023 in cikancung village. The data required is qualitative data, namely primary data and secondary data. Primary data was obtained through interviews and questionnaires to fish cultivators in cikancung village, while secondary data was obtained through documents from the cikancung village government and the food security and fisheries office of bandung regency, west java. The sampling technique used was purposive sampling. The data analysis method in this study is a qualitative descriptive analysis. The results showed that the economic conditions of most cultivators had income in the low category, namely less than idr 5,000,000 per month. The average value of the productivity of fish farming is 0.6 kg/year/m2. The economic factors that hinder cultivators are the lack of capital and the reduced area of cultivator land.There is a need for ongoing research regarding economic mappingby using variables and other methods to monitorWhat are economic conditions of the fish farming community inCikancung village, cikancung district, bandung regency and also there needs to be more intensive outreach and training activitiesTo fish farmers in cikancung village so that business activities are carried outImplemented can be more advanced and developed.



*Keywords:* :*Cikancung village, economic mapping, fish cultivators, survey*


## 1. INTRODUCTION

Economic potential mapping aims to determine the potential that exists in an area and the human resources it has. By knowing local potential, economic and human resources can be maximized to improve the regional economy. The purpose of knowing local economic potential is to identify sectoral economic potential, so that it can be easily utilized in the development of each sector.

Economic mapping can be carried out on a micro scale, namely at the Village level with the aim of understanding the characteristics of a Village, potential and problems, efforts to overcome problems that have been carried out and action plans that must be carried out (Meilantina 2013). In specific research in coastal areas, mapping is used to assist spatial management planning for coastal environments that are prone to use conflicts (Moore et al., 2016). Community development programs that need to be carried out in this research are community-based mangrove rehabilitation, development of environmentally friendly ponds, planting vegetation along the watershed, and planting mangroves in new sediment areas

(Fahrudin et al., 2015). The program design can overcome environmental damage and be useful for the sustainability of cultivation which will have an impact on the community's economy in the future.

Cikancung District is one of the sub-districts in Bandung Regency which has potential in the field of fish cultivation, such as cultivating goldfish, catfish, tilapia and other types of fish. Data from the Bandung Regency Food Security and Fisheries Service in 2023, Bandung Regency has fish production of 8049.82 tons/year from a total of 31 sub-districts. Cikancung District is one of the many sub-districts in Bandung Regency that supports fisheries activities by contributing 74.99 tons/year to still water pond cultivation. From these data it can be concluded that Cikancung District is one of the potential fish cultivation centers in Bandung Regency. Cikancung District itself has quite a lot of Enlargement RTPs spread across several villages. Cikancung Village is one of the villages in the Cikancung District area where the majority of the population are fish farmers, both small-scale fish farmers and large-scale fish farmers. Based on production data obtained from the Bandung Regency food security and fisheries service, it was found that there were 81 Cultivator RTPs in Cikancung Village, Cikancung District, Bandung Regency. These data show that Cikancung Village has the potential for developing fish farming businesses.The Cikancung Village community has been doing fish farming for a long time, but there has been no research on the economic mapping of the fish cultivating community there. Therefore it is important to do the economic mapping of the fish cultivating community in Cikancung Village, Cikancung District, Bandung Regency to understand the description of the characteristics and economic conditions of the community, as well as to know the economic factors that influence fisheries development and can also become material for regional development planning.

As for previous studies related to Economic Mapping Analysis, namely in Asnita Ode Samili's (2018) research regarding Social Mapping Economy of Fishermen's Community on Maitara Island, Tidore City, Islands Province North Maluku. Through this economic mapping, economic conditions can be identified economy of fishing communities on Maitara Island, Tidore City, Islands Province North Maluku and the needs and roots of problems felt by the community fishermen in improving their welfare in the form of survival strategies life of fishing communities on Maitara Island, Tidore City, Islands Province Maluku. In this research, a survey method was used questionnaire as a tool in collecting data. Data analysis using qualitative descriptive analysis to reveal facts about life Socioeconomic Fisherman Community on Maitara Island, Tidore City, Archipelago North Maluku Province. Sampling used a purposive method sampling, namely taking samples based on certain considerations by researchers, determined by selecting respondents who live in the island area Maitara works as a fisherman.

The findings of the study mention the characteristics of socio-economic life In terms of income, fishermen on Maitara Island are relatively low. This is due to due to several factors, namely fishermen still use simple tools in it fishing activities, low level of education (HR) of fishermen and lack of capital to carry out fishing business, this condition causes fishermen to become poor, this can be seen from the condition of the houses fishermen, fishermen's income is low and the majority of fishermen do not have savings. Aside from that, it is also a survival strategy for fisherman on Maitara Island, namely work diversification through side jobs. When fishermen are not out at sea, the work they do is as a craftsman motorbike taxi drivers, farm laborers or construction workers. Another strategy used for survival, namely involving family members (wife and children) in the labor market like selling fish by fishermen's wives.

Social Mapping of the Fish Farming Community in Cikancung Village yet has been researched before, therefore it is important to do research Social mapping. Cikancung Village is one of the centers for aquaculture fisheries bargain in Cikancung District. In the study of economic mappingIn this research, economic conditions were identified The freshwater fish farming community is divided into several variables. To be able to know and improve the socio-economic conditions of the community freshwater fish cultivators in

Cikancung Village, Cikancung District both need to be studied and identified through qualitative descriptive analysis as well There is also a need for development programs from government agencies. Results It is hoped that this social mapping will be useful as material for preparation strategic development plans such as infrastructure development programs supporting programs to improve the social, economic and cultural conditions of society; as well as a program to develop the potential of fish cultivation and the farming community fish in Cikancung Village, Cikancung District, Bandung Regency

## 2. MATERIAL AND METHODS

**Location and Time of Research**

Social Mapping Research The fish farming community is located in Cikancung Village, Cikancung District, Bandung Regency, West Java Province. Time This research was carried out in July 2023 – Aug 2023. The location was chosen with the aim of knowing the socio-economic conditions of fish farmers and what existing fisheries development exists in Cikancung Village, Cikancung District, Bandung Regency.

**Method Of Collecting Data**

The survey method was employed in this investigation. The survey method is a form of research approach activity with respondents to obtain some data, not in the form of the author's opinion but natural data (Sugiyono 2017). The data collection technique in this research used a questionnaire. Questionnaire is a data collection technique that is carried out by giving a set of written questions to respondents to answer (Sugiyono, 2015). The types of data used in this research are secondary data and primary data. Primary data is collected by researchers to answer research questions. The primary data in this research is the fish cultivating community in Cikancung Village, Cikancung District, which has links in social mapping activities as a source of information in the form of interviews and observation notes. Interviews were conducted with fish cultivators spread across the research area randomly using a list of questions or (questionnaire) that had been prepared beforehand. Observations in this research were carried out by observing the behavior of the fish cultivating community in Cikancung Village, Cikancung District and documenting matters related to fish farming business activities in Cikancung Village, Cikancung District. The primary data that will be obtained later is in the form of respondent identity, cultivator characteristics, social and institutional conditions, gender roles, and kinship. Secondary data is data that does not directly provide data to data collectors or in other words is a source of data or documents obtained indirectly by researchers. Secondary data in this study were taken from the Cikancung Village Government in the form of Village monograph data which included information on population data and population numbers, as well as data taken from the Bandung Regency Food and Fisheries Service in the form of data on the number of RTP cultivators and fish production data in the sub-districts of Bandung Regency. The respondent collection technique used in this research was a purposive sampling technique with a total of 30 cultivator respondents with certain criteria such as (1) Fish farming community living in Cikancung Village, Cikancung District (2) Fish cultivating communities with at least 5 years of business experience (3) Group of fish cultivators who are willing to be interviewed.

**Data analysis method**

The data analysis method employed in this study is qualitative descriptive analysis. According to Yuliani (2018) descriptive qualitative is a simple qualitative approach method using an inductive flow. Inductive flow is defined as the implementation of research methods starting with a process or event which can ultimately be generalized into a conclusion. The images obtained include social conditions, community culture, social stratification, culture, ecosystem, natural resources and development. The results of the answers to the questionnaire were then tested using validity and reliability tests. The validity test in this study applied the concept of credibility (internal validity) with the aim of obtaining a level of

confidence in the suitability between data and facts in the field. While the reliability test according to Ghozali (2009) states that reliability is a tool for measuring a questionnaire which is an indicator of a variable or construct. A questionnaire is said to be reliable or reliable if a person's answers to statements are consistent or stable over time.

## 3. RESULTS AND DISCUSSION

### General Condition Of The Research Location

### Description of research location

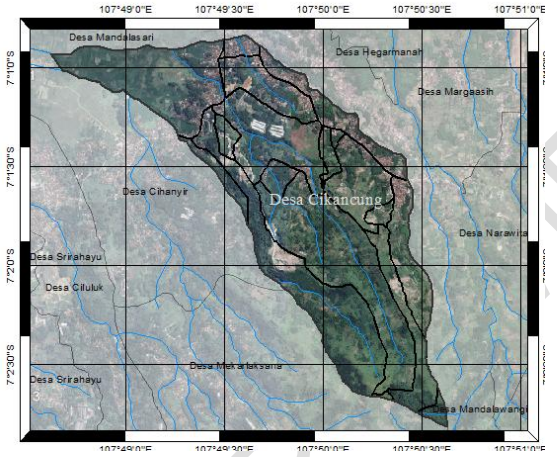


Figure 1. Location map of Cikancung Village

Cikancung Village is a village in Cikancung District, Bandung Regency which has been established since 1908, initially as a result of the expansion of Cicalengka Village. Cikancung village comes from the word Ci which means water and kancung comes from the word nyungcung which means sharp or sharp, so the village means the village where the water is pointed or pointed under the sirah sand of Cikancung.

Community leaders, youth and Ulama at that time hoped that the newly built village would be named Cikancung Village so that in the future it would become a safe, fertile and prosperous village and so that the people would have unity or one opinion and one understanding and also *SilihAsahSilihAsih, Silihasuh*means mutual nurturing (learning), asih (caring), and nurturing (loving) between fellow members of society.

### Geographical and Administrative Conditions of Cikancung Village

Geographically, the area of Cikancung Village ranges from 491 hectares at an altitude of 690-1080 m below sea level. The average temperature of Cikancung Village ranges from 22oC-24oC with an area covering lowlands and highlands in the form of mountains.The entire population of Cikancung Village is grouped into 10 Neighborhood Units (RW) and 40 Neighborhood Units (RT). Administratively, Cikancung Village is divided into five leadership areas including:

a) The Kadus 1 leadership area is divided into RW 01 and RW 09
b) The Kadus 2 leadership area is divided into RW 03 and RW 04
c) The Kadus 3 leadership area is divided into RW 06 and RW 07
d) The Kadus 4 leadership area is divided into RW 05 and RW 08
e) The Kadus 5 leadership area is divided into RW 02 and RW 10

The boundaries of Cikancung Village are as follows:

a. The northern part is bordered by Mandalasari Village.
b. The southern part is bordered by Cihanyir Village.
c. The eastern part is bordered by Mekarlaksana Village
d. The western part is bordered by Mandalasari Village.

The distance from Cikancung Village to the sub-district is 1.5 Km which can be reached on foot or by motorized vehicle for about ± 5 minutes. Meanwhile, the distance from Cikancung Village to Bandung Regency or the city center is 40 Km and can be reached in ± 1 hour by motorized vehicle.

The area in Cikancung Village is used for the area of rice fields, field area, plantation area, cemetery area, residential area, park area, offices and so on. The condition of the land in Cikancung Village is quite fertile soil so it is suitable for use as agricultural land. The soil conditions consist of paddy fields, dry land, wet land, plantation land, public facilities land, and forest land.The climate in Cikancung Village, like other villages in Indonesia, has a tropical climate which is influenced by two seasons, namely the rainy season and the dry season. this has a direct influence on cropping patterns on plantation and agricultural land in Cikancung Village.

**Cikancung Village Demographic Data**

Population or demography is a science that studies the dynamics of human population. Demography includes the size, structure and distribution of the population, as well as how the population changes over time due to births, deaths, migration and aging. According to Rusli (2012), the main sources of population or demographic data are the census, vital events registration system, population registration system, and limited surveys or sample surveys. Another additional source that is often useful is government agency records and documents. The data on the total population of Cikancung Village is 8,356 people consisting of 2,536 heads of families (KK). The composition of the population can be seen in table 1 below.

Table 1. Composition of Cikancung Village Population in 2023

| No | Hamlet | Man | Woman | Number of People | Number of Heads of Families |
|---|---|---|---|---|---|
| 1. | Hamlet 1 | 782 | 722 | 1504 | 486 |
| 2. | Hamlet 2 | 986 | 893 | 1879 | 552 |
| 3. | Hamlet 3 | 785 | 720 | 1505 | 520 |
| 4. | Hamlet 4 | 936 | 896 | 1832 | 521 |
| 5. | Hamlet 5 | 872 | 764 | 1636 | 457 |
| | Total | 4361 | 3995 | 8356 | 2536 |

Data source: Cikancung Village Profile Report Data for 2022

Data on the population of a village is important to know because it is one of the main factors that determines the quality of human resource development in society. The population can be used as a measure of the success of development in population development in an area.

**Local wisdom**

Local wisdom is basic and distinctive knowledge about how to achieve a balance of life between humans and the environment that has been accumulated from the past, and has been practiced by the community for generations (Mungmachon 2012). Local wisdom emerges as a result of people's interpretation of how an environment or natural resource will benefit them. So, it is this interpretation that gives rise to public knowledge in how to protect the environment. Local wisdom plays a role in managing natural resources and the environment. However, local wisdom cannot be separated from various challenges such as the continued increase in population, modern technology and culture, large capital as well as poverty and inequality.

The local wisdom of the fish farming community in Cikancung Village is in the form of local wisdom in preserving springs. Most of the fish cultivating communities in Cikancung Village rarely experience water shortages, this can be seen by the existence of springs with large and steady discharges which are sustainably maintained by the existence of local

wisdom owned by the local community. In the perspective of sustainable development, local wisdom which has been proven to be effective in preventing damage to environmental functions, needs to be continuously explored, studied and developed.
The Cikancung Village community has implemented spring management by perceiving the existing springs as a gift from God that is beneficial for people's lives. Both water and local wisdom are very valuable assets and need to be preserved. Moreover, there is a tendency for water availability to decrease and water demand to increase.

The existing norms are in the form of recommendations from the people of Cikancung Village regarding the existing springs, namely by maintaining the cleanliness of the spring environment, and leaving the condition of the springs as they are and remaining sustainable. Meanwhile, the existing prohibitive norms are in the form of a prohibition on throwing rubbish around the spring, and not making any changes that could damage or have a bad effect on the spring. Local wisdom in Cikancung Village has proven effective in preventing damage to the environmental function of springs in a sustainable manner, so it must be maintained and preserved.

**Economic Institutions**

Economic institutions are social institutions that deal with material welfare issues, namely regulating activities or methods of production, distribution and use (consumption) of goods and services necessary for the survival of society. The economic institutions of a nation require a pattern of management of available economic resources in a directed and integrated manner and used to improve the welfare of society. Economic institutions are expected to work together to manage and move the wheels of the economy.

The economic institutions in Cikancung Village are BUMDesLanggeng Jaya and Cikancung Village Cooperative.

a. BUMDesCikancung

A Village-Owned Enterprise, often referred to as BUMDes or BUM Desa, is a village business institution managed by the village government and village community with the aim of strengthening the village economy and is formed based on the needs and potential that exist in the village. (Ridlwan 2014).The Cikancung Village BUM economic institution has been running since 2016 until now and has become a priority institution for village economic development. The aim of BUMDesCikancung is to improve the economy and community businesses in managing the economic potential in the Cikancung area. Activities that have been carried out and are still ongoing today are 3 Kg LPG gas business activities, pick-up car rental business, trading business stalls for rent in RTH, and computer courses.
Once a month the administrators of the CikancungBUMDes hold a regular meeting agenda between the management and the sub-units to report on the progress of each existing sub-unit. As for the management of the BUM in Cikancung Village, it consists of three people including the Chair, Secretary and Treasurer, and each sub-unit consists of four members. The birth of BUM Desa is expected to be able to move the economic engine in the countryside to move forward together with business units owned by existing and new residents. An important indicator of the success of the BUM Desa is its ability to move and dynamize the wheels of the economy in the village, so that it can increase the economic capacity of its citizens, therefore the business units that are built by the BUMDes should pay more attention to the value chain and supply chain which are more optimal in providing benefits for local residents. The BUM Desa business process needs to be more directed at increasing added value for village residents at every stage of the production process. Business units built through BUM Desa should be directed to optimize local resources, by involving as much regional potential as possible, including business people (HR) from local residents.

b. Cikancung Village Cooperative.

A cooperative is an economic association or organization consisting of people or bodies that provide freedom of entry and exit as members according to existing regulations, by working together in a family manner to run a business, with the aim of improving the physical

welfare of its members (Sudarsono 2017).As for the process of establishing the Cikancung Village cooperative economic institution, it has not been counted for a long time, so that until now its development has not been significant. The activity that has been running from this economic institution is the Savings and Loans Cooperative. Savings and loan cooperatives are cooperatives whose goal is to provide assistance to MSME actors to help develop MSME businesses in Cikancung Village.

Although savings and loan cooperatives have a strategic role for the development of MSMEs, in running their business they have not achieved the success that other business entities have done. This is in accordance with the opinion of Subandi (2007) which states that the factors that influence the not optimal role of cooperatives include, among other things, some cooperative managers do not yet have a sense of business. In addition, the not optimal savings and loan cooperatives in the village can also be caused by limited capital. The scarcity of capital in savings and loan cooperatives has been a factor causing the weakness of cooperatives in Indonesia so far (Pandji and Widiyanti 2007).

**Facilities and infrastructure**

Facilities and infrastructure are the physical basic equipment of a residential environment that meets certain standards for the need for a decent, healthy, safe and comfortable place to live that functions to support the implementation of culture and economy. The availability of facilities and infrastructure in each region cannot be said to be adequate because it is still rare to evaluate facilities and infrastructure in that area. The rural facilities and infrastructure in Cikancung Village include:

1. Road infrastructure for population mobility

The existence of road infrastructure in Cikancung Village is an asset of the Bandung Regency Government and West Java Provincial Government with details:

a. Length of village road: 8 Km
b. Length of District road: 1 Km
c. Regency road length: 6 Km
d. Length of environmental roads: 9 km
e. Length of trail: 5 Km

Most of the roads in Cikancung Village are in good condition and are paved which can be traversed by public vehicles such as cars, motorcycles, pedicabs, and other means of transportation. The road infrastructure has a very big role in human life in the economy and development. Transportation between regions in Cikancung Village is quite smooth, this is because Cikancung Village connects between hamlets and between other villages. Mobilization activity in Cikancung Village is quite high, especially the mobilization of transportation of agricultural products and other sources of economic activity.

2. Clean Water Infrastructure

Clean water is water that is used for daily needs and the quality meets the health requirements of clean water in accordance with applicable laws and regulations and can be drunk when cooked. The provision of clean water for the community has a very important role in improving environmental or community health, namely playing a role in reducing the number of people with diseases, especially those related to water, and playing a role in increasing the standard or standard of living of the community. The clean water infrastructure used in Cikancung Village is in the form of dug wells and pump wells.

3. Garbage Disposal Facilities

The infrastructure that is used as a garbage disposal in Cikancung Village is the existence of trash bin infrastructure. The existence of rubbish bin infrastructure in Cikancung Village aims to make it easier for people to dispose of rubbish and to reduce costs and resources to overcome the problem of carelessly thrown rubbish. The existence of this garbage bin infrastructure is intended so that people do not throw garbage in the area around the settlement to the river flow.

4. Shopping Facilities

Shopping facilities are facilities used by village communities in carrying out buying and selling activities. The shopping facilities in Cikancung Village include shops, cooperative kiosks, and individual kiosks.

5. Security Facilities

The security facilities in Cikancung Village are the Village Security Post. The Environmental Security Post, commonly known as Poskamling, is one of the facilities in the community environment, which aims to maintain the security of the surrounding environment.

The existence of these security facilities can create a sense of security and order in social life which will create a harmonious life among the community, and can increase the level of community welfare in carrying out daily activities. On the other hand, if society is faced with unsafe conditions, it will have an impact on disrupting the order of social life. The existence of this environmental security system is an effort to maintain village security and order with the participation of all residents (Prahati et al., 2017). The environmental security system is a form of independence which is an integration of interdependent and interrelated components that provide a sense of security in society.

The security post facilities in Cikancung Village generally function as a security post which is used at night, but outside of security hours, the security post is often left unused. Therefore, it is necessary to utilize these security posts for other purposes.

6. Health Infrastructure

The health infrastructure in Cikancung Village is a Posyandu. Posyandu is a form of Community-Based Health Efforts (UKBM) which is managed from, by, for and with the community, in order to empower the community and provide convenience to the community in obtaining basic health services (Ministry of Health RI 2012). Posyandu as a center for community activities in the health sector provides family planning, nutrition, immunization, diarrhea management and MCH services. This effort to integrate services is one way to increase the reach of health services to the community. Based on this, the purpose of establishing Posyandu is to reduce infant and toddler mortality rates, birth rates in order to create happy and prosperous small families. Thus Posyandu is a basic health activity organized by the community and for the community assisted by health workers (Saepudin et al. 2017).

7. Formal Education Infrastructure

Formal education is an institution called a school which is part of a tiered and continuous education (Sagala 2008). Formal education infrastructure in Cikancung Village includes SD, MI, SMP, MTS, and SMA. The existence of educational infrastructure can certainly improve the quality of human resources which will ultimately foster development awareness. The higher the level of education that the community has, the more information and understanding about development. Conversely, if a low level of education is generally coupled with limited information and understanding, thus opportunities are also limited (Widyaningsih 2013).

**Overview of Fisheries**

Cikancung Village is one of the villages in Cikancung District which has a very significant area. This can be seen from the residents' quite spacious yards. Most of the people in Cikancung Village make their living as rice farmers. However, the rice fields in Cikancung Village are rain-fed, so people can only plant rice once a year. When the rice fields are dry and cannot be planted with rice, people use their free time to grow vegetables and there are also those who use their free time to cultivate freshwater fish using their home gardens. However, freshwater fish cultivators in Cikancung Village have difficulty getting fish food because of the high price, lack of capital and lack of knowledge and skills of cultivators in marketing, causing the majority of freshwater fish cultivators in Cikancung Village to decide not to continue this business. and make it a side business. However, for some

respondents who have sufficient capital and adequate knowledge and skills, the fish farming business continues to this day.

The general condition of fisheries in Cikancung Village is that the majority of fish farming communities carry out fisheries activities in the grow-out stage. The fish cultivating community in Cikancung Village buys fish seeds from cultivators in other areas such as in the Ibun, Pacet and Majalaya areas, there are also those who get seeds from the Fish Seed Center in the Ciparay area and there are also those who get seeds from the Fish Farming Unit. People's Nursery in the Cicalengka area.

The seeds that have been obtained are then spread and kept in traditional ponds that the cultivating community owns for several months until they reach consumption size at harvest time. After harvesting, most of the fish produced is sold and the rest is used for family consumption. Fish sales carried out by fish cultivating communities are mostly aimed at local communities, and some are sold through dealers or collectors and then resold at the ParakanMuncang fish market and Cicalengka fish market.

**Economic Overview of Fish Farmers**

**Overview of Fish Farming Business**

1. Technical Aspect

Cultivation efforts at the research location are carried out traditionally, namely in permanent ponds. Based on the results of interviews and observations of the technical aspects of traditional fish rearing cultivation in permanent ponds which include pond preparation, fish rearing and rearing, and fish harvesting. Preparing a pond for fish rearing is using a permanent pond with an earthen bottom and four sides made of concrete. Pond preparation includes drying, liming and irrigating. The pool was dried for 7 days until the soil appeared cracked. After drying, liming is carried out using dolomite lime which is spread all over the bottom of the pond. After the liming process, then fill with water with a height of about 30-40 cm, and leave it for about 7 days so that natural food can grow.Maintenance and enlargement begins with sowing seeds. Tilapia seeds stocked in grow-out ponds measure around 5-7 cm. The number of seed stockings in Cikancung Village for each pond ranges from 50–100 individuals/m2. Seed distribution is usually done in the morning or evening.

Fish farming activities certainly have special requirements as stipulated in the Decree of the Minister of Maritime Affairs and Fisheries Number 02/KEP/2007 concerning Good Fish Cultivation Methods (CBIB). Good fish farming methods (CBIB) are a way to maintain and/or raise fish and harvest the results in a controlled environment so as to guarantee food safety from cultivation by paying attention to sanitation, feed, fish medicine, and chemicals, as well as biological materials (Kep. Men KKP 2007).

The importance of implementing Good Fish Cultivation Methods (CBIB) in each cultivation business unit will provide good benefits to farmers and consumers. The principles in CBIB must be applied in cultivation business units in order to produce quality and sustainable fishery products. The implementation of this program on how to cultivate good fish is an activity that teaches about how to cultivate fish well so that it produces good products. Fish farmers must look for cultivation locations that do not pose a danger, water supply to ponds, layout and design, cleanliness of facilities and equipment, preparation of containers and stocking, water management, fish seeds, fish food, harvest and so on. The CBIB assessment requirements consist of 18 suitability assessments including suitability of location, water supply, layout and design, cleanliness of facilities and equipment, preparation of cultivation containers, management of water, seeds, feed, use of chemicals, biology and fish medicine, use of ice and water, harvest, produce handling, transportation, waste disposal, record keeping, corrective action, personal hygiene.

The suitability assessment for fish growers in Cikancung Village is presented in table 2 below:

Table 2. CBIB Suitability Assessment for Fish Rearing in Cikancung Village

| Assessment Aspects | Research result | | CBIB Implementation Aspects |
|---|---|---|---|
| | Suitable | Not Suitable | |
| Location | | ✓ | Environmental conditions comply with food safety and are free from pollution. |
| Water Supply | ✓ | | Access to abundant water sources and avoid pollution. |
| Layout and Design | | ✓ | The cultivation business area is good for cultivating freshwater fish, especially for cultivating containers in still water ponds. |
| Cleanliness of Facilities and Equipment | | ✓ | Free from pollution and pests and equipment is maintained in hygienic condition. |
| Preparation of Cultivation Containers | | ✓ | The preparation of the container is carried out properly and correctly according to environmental conditions and in the preparation of the container, the water used only uses recommended fertilizers, probiotics and chemicals.. |
| Water Management | | ✓ | Water filtering or settling is carried out before it is used for cultivation and ensures that the water quality is suitable for the fish being cultivated and the quality of the source water is regularly monitored to ensure the water quality is suitable for the fish being cultivated and water management is carried out after the production process.. |
| Seed | ✓ | | The seeds are healthy and do not contain dangerous diseases. |
| Feed | ✓ | | Registered, labeled feed and natural feed are free from harmful ingredients. |
| Use of Chemicals, | ✓ | | The use of chemicals, biology and |

| | | | |
|---|---|---|---|
| Biologicals, and Fish Medicines | | | fish medicines must be in accordance with those permitted by the DJPB registration number and must comply with instructions and supervision.. |
| Use of Ice and Water | | ✓ | Ice only comes from approved suppliers and uses drinking/clean water and is received in sanitary conditions and handled and stored in hygienic conditions. |
| Harvest | ✓ | | Harvest handling is carried out in clean and hygienic conditions and does not cause physical damage. |
| Results Handling | ✓ | | Handling and equipment for handling the results are easy to clean and disinfect and are always kept clean and dead fish are immediately cooled and the temperature is kept close to 0oC throughout. |
| Transportation | ✓ | | Transport is maintained in hygienic conditions. |
| Waste disposal | | ✓ | Waste disposal is carried out in a hygienic and sanitary manner to prevent contamination. |
| Recording | | ✓ | Records are made on the type and origin of feed (manufactured feed) as well as fish feed raw materials (for homemade feed) and records are kept of the use of fish medicines, chemicals and biological substances or other treatments during the rearing period. |
| Corrective action | | ✓ | Corrective action (for food safety hazards) is carried out as a routine & controlled activity and corrective action is carried out appropriately & immediately |

| | | |
|---|---|---|
| | | according to problems found. |
| Training | ✓ | Training is provided to groups of farmers in preventing and controlling food safety hazards in aquaculture. |
| Personnel Hygiene | ✓ | Business actors or workers who keep fish in healthy condition. |

Source: Processed from Primary data

The location of the cultivation business unit is in an unsuitable environment where the risk of food safety from chemical, biological and physical hazards still has the potential for contamination from industry, households and others so that production results do not guarantee food safety. According to Setyawan et al., (2021) location selection is necessary to obtain a water source that meets the threshold, and technology is needed to maintain optimal cultivation water quality.Most of the water supplies for fish farming business units in Cikancung Village have good water sources and the water supply is protected from sources of pollution. Having a good and clean water supply used in cultivation can be the main factor that determines the success of fish cultivation against disease attacks and can support the survival and growth of cultivated fish.

Fish cultivation business activities in Cikancung Village are not productive because the layout and design are not able to accommodate all the fish commodities being cultivated. The business activities being developed are vulnerable to the spread of parasites and diseases in fish which can result in mass deaths. According to Lesmana and Daelami (2009), the layout and design of fish cultivation containers requires at least 5 types of tanks, namely brood tanks (2.7%), spawning tanks (0.60-1.20%), hatching tanks (0.60-1.20%). .82-7.42 %), nursery tanks (60 %), and selection tanks or holding tanks (27.2 %). The ideal shape of the tub is rectangular because the total water circulation in the tub is relatively fast and the fresh incoming water can be distributed evenly throughout the tub, so that the tub can be easily drained, the bottom is made of landau starting from the front of the water surface towards the outlet hole.

Cleanliness of facilities and equipment is a way to increase productivity by maintaining the continuity of freshwater fish farming business activities. The cleanliness in fish farming in Cikancung Village is not in accordance with CBIB so it can reduce the level of business productivity. Preparation of containers in the form of fertilizing production land is carried out by fish farmers in Cikancung Village which can produce natural food that can be used for fish seeds and larvae. According to Lesmana and Daelami (2009) in maintaining the cleanliness of facilities and equipment as well as preparing cultivation containers, the most important thing to do is manage and clean the containers. The equipment needed and important for keeping fish includes a blower, generator, aerator stone, and a small water pump or power head.

The preparation of cultivation containers carried out by cultivators in Cikancung Village has been managed well and correctly. The aim of preparing good cultivation containers and water is to facilitate the fish rearing process and increase the growth and survival of fish seeds.Water quality management is an effort to control water quality so that water quality is achieved in the desired condition according to its intended purpose, as well as to ensure that water quality remains in its natural condition. In aquaculture activities, water quality management includes an activity program that directs aquaculture waters to balance the aquatic ecosystem in a limited container, in order to create a water condition that resembles the natural habitat of cultivated aquatic biota, both in terms of nature, behavior and ecology. . Water management is not carried out by cultivators in Cikancung Village, which includes water filtering and settling before it is used for cultivation as well as monitoring water quality,

both source water and cultivation pond water, regularly. The purpose of filtering or settling efforts is to ensure water quality that is suitable for farmed fish.

The seeds used by fish farmers in Cikancung Village are good, healthy and free from disease. The characteristics of healthy seeds are agile swimming, normal body shape, uniform size and disease free.Fish farmers in Cikancung Village use a lot of natural food and commercial food. The natural feed used is feed that comes from plants such as taro leaves and cassava leaves, while the commercial feed used is feed that is generally often used by cultivators which comes from shops with a protein content of 30% which has a registration number and does not contain any ingredients. dangerous chemicals such as antibiotics, fish medicine, hormones or other prohibited ingredients. Apart from that, the fish food is stored in a hygienic place and not exposed to direct sunlight to maintain the quality of the food and is used before the expiry date or before the food looks damaged, such as moldy and has a musty smell. The frequency and intensity of feeding is adjusted to the size of the fish's mouth opening, the age of the fish, and the number of fish being cultured. According to Lesmana and Daelami (2009), the feeding process is adjusted to the size of the fish's mouth opening because it is impossible to provide large-sized feed to larvae or fry and vice versa.

The use of chemicals, biological materials and fish medicines in fish farming in Cikancung Village is only done when the fish are attacked by disease. The medicine used by most respondents from the cultivating community if their fish are infected with disease is to use biological medicine which is safe and in accordance with CBIB regulations. The use of drugs and anti-microbials must be done responsibly and effectively in the prevention and treatment of fish, as well as preventing negative impacts on the environment. Fish medicine has a clear and complete label regarding composition, dosage, indications, method of use, expiration date and drug withdrawal period in Indonesian.

Fish farming community respondents in Cikancung Village do not use ice during the harvesting period. When the harvest time arrives, the fish farming community in Cikancung Village only uses sufficient amounts of clean water for harvesting, handling the results and cleaning.Harvesting carried out by fish farming community respondents in Cikancung Village was carried out in clean and hygienic conditions and did not cause physical damage. To get quality harvests, of course you need to pay attention to good harvest conditions and procedures to ensure that the quality of the harvest is maintained. Fish harvesting is also carried out by paying attention to the age of the fish, the weight of the fish when stocked, the weight of the fish at harvest, and the time of harvest.Handling of fish farming products in Cikancung Village is carried out quite well, quickly and hygienically. Fish caught or harvested must be handled immediately to prevent a decline in the quality of the fish.

Transporting live fish is basically placing the fish in an environment that is different from its original environment. The difference is made to be as small as possible so that the transported fish can survive until they reach their destination and efforts are made to minimize the death rate during transportation. Fish transportation carried out by fish cultivating community respondents in Cikancung Village is maintained in hygienic conditions. There are several things that farmers need to pay attention to when transporting fish, including the container for packaging the fish, the density of the fish in the container and the transportation system. When transporting, the density of fish depends greatly on the size of the fish, the transport system and the duration of transport. If the fish are too dense it will cause the fish to quickly become damaged and rot or die.

Waste disposal is one of the important things in fish farming, the aim of which is to prevent waste from being dumped directly into nature. Waste disposal carried out by fish cultivating community respondents in Cikancung Village is thrown directly into the drain without going through a sanitation process. Disposal of fishery waste directly into water bodies will cause pollution to water bodies considering that fishery waste contains chemical compounds in the form of protein and fat, so it needs to be done in a hygienic and sanitary manner.

Recording of fish farming activities in Cikancung Village was not carried out, they only did it based on assumptions. This recording can be done on the type and origin of feed (manufactured feed) as well as raw materials for fish, keeping records of the use of fish medicines, chemicals and biological materials or other treatments during the rearing period, keeping records of water quality (source water, supply water, water maintenance and liquid waste) as needed, keeping records of disease incidents that may have an impact on food safety of fishery products and records/recording of fish transportation.Corrective actions for fish farming activities in Cikancung Village were not carried out in a routine and controlled manner. Corrective action of course needs to be carried out appropriately and immediately according to the problems found.

Training activities have been provided to fish cultivators in Cikancung Village in preventing and controlling food safety hazards in aquaculture and to increase the insight, knowledge and skills of fish cultivators which will later be able to produce quality fish production that guarantees food safety and is able to improve the economic level of the community.Personal hygiene is of course one of the important things in carrying out fish farming activities. Workers or fish cultivators in Cikancung Village who handle fish are in healthy condition. Personal hygiene is the activity or act of cleaning all parts of the body with the aim of maintaining a person's cleanliness and health.

Based on all these indicators, the implementation of CBIB fulfilled by fish cultivating community respondents in Cikancung Village was 50%. Therefore, more intensive counseling and training is needed for fish farmers so that the implementation of CBIB in Cikancung Village can run more optimally.

2. Economic Aspect

Enlargement activities certainly have economic aspects that support the running of the business. An overview of the economic aspects of the fish rearing business in Cikancung Village can be seen in the following table 3below.

Table 3. Description of the Economic Aspects of Fish Growing Business in Cikancung Village

| No | Characteristics | Category | Number of people | Percentage (%) |
|---|---|---|---|---|
| 1. | Total area of the pool owned ($m^2$) | Micro (<1.000) | 22 | 73,3 |
| | | Small (1.000-5.000) | 7 | 23,3 |
| | | Intermediate (>5.000 - 10.000) | 0 | 0 |
| | | Big (>10.000) | 1 | 3,3 |
| | Total | | 30 | 100 % |
| 2. | Number of Pools owned (Plots) | 1-5 | 28 | 93 |
| | | 6-10 | 0 | 0 |
| | | >10 | 2 | 7 |
| | Total | | 30 | 100 % |
| 3. | Number of Production Per Cycle/Plot | <100 Kg | 22 | 73,3 |
| | | 100-200 Kg | 5 | 16,7 |
| | | >200 Kg | 3 | 10 |
| | Total | | 30 | 100 % |
| 4. | Cultivator's monthly income | <5.000.000 | 28 | 93 % |
| | | p 5.000.000-9.000.000 | 0 | 0 |
| | | >Rp 9.000.000 | 2 | 7 % |

| | | | | |
|---|---|---|---|---|
| | Total | | 30 | 100 % |
| 5. | Source of feed obtained | Factory/agent | 20 | 67 |
| | | Shop | 10 | 33 |
| | Total | | 30 | 100 % |
| 6. | Transaction used to Purchase Feed | Pay Cash | 30 | 100 |
| | | Credit/ Borrowing | 0 | 0 |
| | Total | | 30 | 100 % |
| 7. | Source of feed obtained | Factory/agent | 20 | 100 |
| | | Shop | 10 | 0 |
| | Total | | 30 | 100 % |
| 8. | Transactions used Purchase Seeds | Pay Cash | 30 | 100 |
| | | Credit/Loan | 0 | 0 |
| | Jumlah | | 30 | 100 % |
| 9. | Main Purpose of Marketing | City/Collectors | 2 | 7 % |
| | | Consumers/Residents | 28 | 93 % |
| | Total | | 30 | 100 % |

Based on table 3 above, the majority of fish farming respondents in Cikancung Village with a percentage of 73.3% have a pond area of less than 1000 m2. Cultivation land area <1000 m2 is included in the micro category (Hermawan 2017. The wider the pond cultivated, the greater the income earned by the cultivator, this is because the fish seeds put into the pond depend on the size of the cultivator's pond. If the size of the pond If the area of the cultivator pond is small, fish seeds are put into the pond in small quantities (Rahmatunisa 2021). The ponds owned by most respondents are 1-5 plots with different sizes of pond plots, Meanwhile, there are only a few who have pools of more than ten plots, namely only two people.

Fish production in this research is the harvest in one rearing cycle for 4 months in one pond plot. A total of 22 people with a percentage of 73.3% produced fish production of 100–200 Kg, 5 people with a percentage of 16.7% produced fish production of <100 Kg, and 3 people with a percentage of 10% produced a production of >200 Kg. The average production produced by fish farmers in Cikancung Village is 285 kg.The income of fish cultivators in Cikancung Village is in the low category, namely less than IDR 5,000,000 per month, amounting to 28 people or 93%, there are no fish cultivator respondents in Cikancung Village who are in the medium category, namely with income between IDR 5,000,000 and IDR 9. 000,000 per month and the income of fish farmers who are in the high category with income of more than IDR 9,000,000 per month is 2 people or 7%. In general, their income per month is not fixed. The income earned by fish cultivators in Cikancung Village is relatively low, because the majority of respondents are side fish cultivators, most of their income does not come from fish farming but from their main jobs, namely farmers, traders and village government employees. Respondents with incomes in the high category are primary cultivators, that is, most or all of their income comes from aquaculture businesses.

The ever-increasing price of feed is one of the main obstacles faced by farmers, because the increasing price of feed is not commensurate with the selling price of fish. When unable to buy pelleted feed, cultivators only use natural feed from plants or are not given feed. This has an impact on production results, the fish produced will have large heads with small bodies so the selling price is cheap. Farmers usually buy feed in the form of pellets from agents or dealers by paying in cash. The price of pellets also differs depending on the

protein content in them, the higher the protein content, the more expensive the feed will be. As for cultivators who cannot afford to buy feed per sack, they usually buy retail feed in shops or kiosks, namely Hi Pro-Vite 781 brand feed at a price of Rp. 14,000 per kilogram which has been ground and has a protein content of 31%-33%, fat 3-5 %, 11-13% moisture content, 4-6% fiber, and 10-13% ash content.

Most of the cultivators buy seeds from other cultivators in the Ibun, Pacet and Majalaya areas. Meanwhile, several other respondents were obtained from the Bandung Regency Fish Seed Center in the Ciparay area, namely at a price of Rp. 30,000 per kilogram with a content of around 100 -150 tilapia fish seeds, and for catfish seeds measuring 5-6 cm with a content of around 300 tail and 7-9 cm in size with a content of about 400 tails. Apart from that, there were also fish cultivator respondents in Cikancung Village who received seeds from the People's Hatchery Unit located in the Ciseureuh area, Margaasih Village, Cicalengka District, Bandung Regency. All cultivator respondents made transactions to buy seeds in cash.The seeds used by all fish farmers in Cikancung Village are good and healthy seeds. Observationon the health of fish seeds must be done as early as possible appropriately so that nohas an influence on the fish seeds that will be kept, because the seed stage isa period that is very vulnerable to disease attacks (Afriani, 2016).

When running a business, we need to pay attention to good marketing goals. Buchari Alma (2004) stated that the aim of marketing is to seek market balance, between buyer's market and seller's market, distributing goods and services from surplus areas to minus areas, and producers to consumers, from owners of goods and services to potential consumers.The main marketing objectives of the fish cultivator respondents in Cikancung Village were mostly aimed at the consumers of the Cikancung Village community itself, only a few respondents whose marketing objectives were aimed at dealers/collectors because they were considered more practical even though price fluctuations were often complained by the cultivators. Food-sized fish are sold at prices ranging from IDR 18,000-30,000 per kilogram depending on the type of fish sold. The dealers/collectors then sell the fish to the wholesalers at the ParakanMuncang Fish Market, the Cicalengka Fish Market then sell the fish to consumers.The dealer is a marketing institution whose function is to collect the potato harvest from producers for distribution directly to wholesalers, both in main markets, outside the city, and export companies. The dealer's role is quite large as a liaison between farmers and the next marketing institution.

**Marketing**

Marketing is the flow of goods from producers to consumers. This activity is an important factor that will determine the success of a business that is owned. The business owned must be able to produce quality products, set the right price, and carry out effective promotions. The success of a business really depends on the entrepreneur's expertise in determining the elements in the marketing mix which include product, price, promotion and distribution. Marketing activities can be carried out using very simple marketing, namely by selling the harvest to fish auction places both within and outside the region. Apart from that, marketing is also carried out by word of mouth communication or word of mouth marketing.

Most of the respondents from the fish cultivating community in Cikancung Village, when the harvest time arrives, the cultivators only do word of mouth marketing because this is the only strategy that is most effective and can be used by cultivators for their fish farming business. Kotler & Keller (2007)suggests that Word of MouthCommunication (WOM) or communication fromword of mouth is a communication processin the form of providing good recommendationsindividually or in groups towardsa product or service that aims toprovide personal information. Only a few respondents market through dealers/collectors, as a result the consumers of most of the businesses carried out by fish farmers are only the same people and their closest neighbors. Apart from that, the marketing problem experienced by the fish farming community in Cikancung Village is the uncertain selling price of fish on the market. This was caused by harvesting at the same time as the other cultivators. To overcome this, of course, a marketing strategy is needed. Swasta (2018) said marketing

strategy can be defined as a grand design that describes how a company must operate to achieve its goals.

The marketing strategy used by fish cultivators in Cikancung Village is by implementing 4 (four) marketing tools in the marketing mix that have been conceptualized by Kotler and Armstrong (2014), or what is known as the 4P, namely product, price, place or distribution channel, and promotion.

1. Product Marketing Strategy

Products are an important part of the marketing mix. The determination of consumers in making purchases of the products we sell is by looking at the quality of the products we have. Good and quality products will support business success in selling fish. besides that good product quality will of course provide high satisfaction from consumers. The strategy used by most of the fish cultivator respondents in Cikancung Village to maintain product quality so that it is suitable for sale is to pay attention to the feed and seeds they have. To get the feed and seeds they have, fish cultivators in Cikancung Village work together by establishing partnerships among group members or the community which can be useful in strengthening solidarity and showing a level of mutual concern among fellow fish cultivators. The partnership that occurred in the fish cultivating community in Cikancung Village can be seen from the presence of several respondents who purchased fish seeds from other cultivators as well as the cooperation between fellow fish cultivators in Cikancung Village regarding fish feed.

Apart from that, another strategy carried out by the fish cultivating community is by holding gatherings and discussions once a month with other members and also with fisheries extension officers to predict and discuss regarding seeds, feed used and any obstacles that occur in the fish farming they use. do that can hinder in producing quality fish products.

2. Pricing Strategy in Marketing

Price is one element of the marketing mix that generates revenue. Price is the easiest element in a marketing program to adjust. Apart from that, price is also the most flexible marketing mix. Entrepreneurs can make price changes quickly to respond to changes that occur in the market.Most fish cultivator respondents in Cikancung Village determine the price per kilo of fish by looking at market conditions. If the price on the market is cheap, then the price of the fish is sold cheaply, and vice versa. But fish farmers can see and compare the selling prices of their fish from several agents who usually buy their fish. After knowing the prices from several agents, fish farmers can sell their fish to the agent who can give the most expensive price so that they can make more profits.

3. Place Strategy in Marketing

Place or distribution relates to the transfer of product ownership from producers to consumers. Strategic places and locations have a big influence on sales. A place that is easy to find and not far from the market center is one thing that can support the buying and selling process and increase sales because people can know the presence of fish traders around the location.For the majority of fish farming communities in Cikancung Village, the place they use to sell fish is at home. Most consumers who buy fish always come to the fish cultivator's house, but there are also those who sell through dealers/collectors who are then resold by the dealers/collectors at the ParakanMuncang Fish Market and Cicalengka Fish Market. This depends on how many relationships they have, the more relationships the easier it will be to sell fish.

4. Promotional Strategy in Marketing

Promotion has two objectives, namely informing consumers about the product they have and persuading them to buy our product. Promotion can be done in various ways, directly or indirectly, for example by placing banners where we sell. Moreover, with advances in technology that make things easier for humans, promotions can also be done by utilizing the internet and social media which can be done anytime and anywhere.For the majority of

fish cultivating community respondents in Cikancung Village, the promotional technique used was word of mouth marketing, namely by communicating directly with neighbors and surrounding communities about the fish produced, and after that the community would recommend to other residents about fish produced so that marketing is increasingly growing.

**Fish Farming Productivity**

Productivity is one measure of the level of economic well-being of society. The higher the level of pond productivity, the higher the level of welfare. Productivity is also the ratio between the total expenditure at a certain time divided by the total input for that period. Productivity is the ratio of output to input resources used (Sulaeman 2014). By definition of work, productivity is the ratio between the results achieved (output) with the overall resources (input) which are calculated in units of time Increased productivity will make a positive contribution to economic improvement. Productivity is not the same as production, but productivity is a combination of effectiveness and efficiency. Productivity can be expressed as the ratio between output and input. (Isyanto 2012).Productivity can also be interpreted as a measure that states how things should beResources are managed and utilized to achieve optimal results. (Handoko, 2012).The higher the input, the greater the output.Success in increasing business productivity requires tenacity, perseverance, and capitaladequate, mastery of technology and implementation of business strategies. With the potential of societyIt is hoped that they will be able to absorb knowledge (transfer knowledge) and howutilize and implement it to overcome various life problems as wellimprove the standard of living towards a better direction. (Sembiring, 2009). The productivity of fish farming businesses in Cikancung Village is in the following table.

Table 4. Average Productivity of Fish Cultivation Businesses in Cikancung Village

| Description | Research Result |
|---|---|
| Average Production per Maintenance Season (Kg) | 285,53 |
| Average Total Production per Year (Kg/year) | 856,6 |
| Average Land Area (m2) | 1183,13 |
| Average Productivity per Unit Area (Kg/yr/m2) | 0,6 |

Source: Primary Data (processed) 2023

Based on table 4, it shows that the average production value per maintenance season is 285.53 Kg. The average total annual production is 856.6 Kg/year. The average land area is 1183.13 m2. The average value of productivity per unit area obtained is 0.6 Kg/yr/m2. This can be interpreted that cultivating fish rearing businesses in still water ponds in Cikancung Village will get 0.6 kg/m2/year of total harvest from every 1 m2 of pond area it has.

These results are in accordance with research results from Laksmidevi and Purwohandoyo (2018), which stated that pond area has a significant and inverse (negative) influence on the productivity of cultivation ponds. This is because the pond area is a divider of the total production resulting from a cultivation business, so that when the pond area increases, the productivity value will be reduced or reduced. The research results of Laksmidevi and Purwohandoyo (2018) can be supported by the research of Mustafa and Ratnawati (2007) which explains that increasing the area of cultivation ponds can reduce the productivity of these cultivation activities. This is caused by the reduced ability of cultivators to manage the business due to limited time and energy and funds.

Increasing productivity can be done by continuously improving the quality of seeds and feed. Improving seed quality can be done by developing new strains of cultivated fish. Increasing feed quality can be done by increasing the feed conversion ratio to fish weight (Suryana et al., 2014). This will be in accordance with the amount of feed given to the needs of the fish being cultivated. One way to regulate the amount of feed given is to implement feeding management (Sari et al., 2017). Feed management methods can avoid wasting feed in vain. So that feeding based on a certain frequency or dosage can help prevent losses for fish farmers. Based on these factors, it is hoped that the productivity of the land owned can be optimized to increase the amount of fish production in Cikancung Village.

**Economic Factors that Influence Fish Cultivation Business**

**Economic Factors that Increase Fish Cultivation Business**

1. Fish Farming Infrastructure Assistance Program

The assistance program for fish farming facilities and infrastructure can motivate farmers to carry out cultivation businesses. This assistance can help increase fish production for cultivators in Cikancung Village who are members of the fish cultivator group. Government assistance is said to be successful if the program can show good effectiveness. This is characterized by the output produced being in line with what was expected or targeted, especially in increasing production capacity and added value of fishery products. According to (Halim, 2013) effectiveness is a measure of the success or failure of an organization in achieving its goals. If an organization succeeds in achieving its goals, then the organization is said to be running effectively. Effectiveness measures the final results of a service which is linked to its output. Effectiveness indicators describe the range of consequences and impacts (outcomes) of program outputs in achieving program goals. Apart from that, program effectiveness can be assessed using an evaluation model. (Arikunto, 2014) states that the general aim of evaluation is to find out how effective the program is being implemented..

2. Increasing Public Purchasing Power and Consumption of Fish

The increase in people's purchasing power and consumption of fish is caused by income level, number of family members and the price of fish as well as people's tastes in consuming fish. The increase in consumer purchasing power for fish sold by the cultivating community in Cikancung Village is proven by the increase in income owned by cultivators from their previous income.According toAsriani et. al. (2016) the level of fish consumption in society is determined byincome level. The greater the community's income earned,the better the consumption pattern will be. This will affect powerbought by the public to meet their needs.

**Economic Factors that Hamper Fish Farming Business**

1. Lack of Business Capital

The lack of business capital owned by the majority of fish cultivating communities in Cikancung Village is one of the economic factors that can hamper fish cultivation businesses. This can be seen from the use of feed and the technology used is still simple, causing fish farming activities in Cikancung Village to not run optimally.According to Endang Purwati (2012)Business capital has been proven to have a positive effect andsignificant to business development, This deserves attention because of the resultsresearch shows that business capitalhas the most dominant influence on a business being run.

2. The price of feed is quite expensive

The increasingly high price of feed is also one of the main obstacles that can hinder cultivation businesses. The increasing price of feed is not commensurate with the selling price of fish. When unable to buy pelleted feed, cultivators only use natural feed from plants or are not given feed. This has an impact on production results, the fish produced will have large heads with small bodies so the selling price is cheap. Cultivators need to be guided by the relevant government to make alternative feed independently by utilizing local raw materials which are processed into pellets to reduce production costs. Some material

requirementsalternative feeds are easyobtainable, cheap price and havequite high nutritional content(Suprayudi et al., 2011). Additionally, forovercome farmer dependencyto commercial feed at high pricesheight can be done by manufacturingindependent feed made from local raw materials.Available local raw materialsused include fish meal, floursoybean meal, tofu dregs and bran.

3. Reduced land area owned by fish farmers

The land area owned by fish farmers in Cikancung Village has decreased. This is due to land conversion. Lestari (2009) defines transferland function or what is usually calledas land conversion is changefunction of part or all of the arealand from its original function (asplanned) to be another function thatbe a negative impact (problem)to the environment and potential of the landAlone.According to Rauf (2010) function transferland has an impact on economic conditions,social roles, cultural value orientations,social stratification, and employment opportunitiesas well as community business opportunities.

Land that was originally used as fish farming ponds was converted into other land such as residential land, business land for sales and so on. The reduction in land for fish cultivation can certainly affect the income of fish cultivators in Cikancung Village, because the wider the pond cultivated, the greater the income earned by the cultivator, this is because the fish seeds put into the pond depend on the size of the cultivator's pond. . If the pond area is large, fish seeds are put in large quantities, whereas if the area of the cultivator's pond is small, fish seeds are put into the pond in small quantities (Rahmatunisa 2021).Therefore with more and morethe large number of land conversionshappened during this time will give rise tovarious problems (Mustopa, 2011)

## 4. CONCLUSION

The economic condition of most cultivators has an income in the low category, namely less than IDR 5,000,000 per month. Economic factors that hinder cultivators are lack of capital, the price of feed is quite expensive and the reduction in land area owned by cultivators.

## RECOMMENDATION

1. There needs to be ongoing research regarding economic mapping using other variables and methods so that we can monitor the economic conditions of the fish farming community in Cikancung Village, Cikancung District, Bandung Regency.
2. There needs to be more intensive outreach and training activities for fish farmers in Cikancung Village so that the business activities they carry out can be more advanced and developed.

## REFERENCES


Afriani, D. T. 2016. The Role of Fish Hatcheries in Fish Cultivation Businesses.Journal News Edition: 49 ISSN: 1829-7463.

Arikunto, S. and C. S. A. J. (2014). Evaluation of Educational Programs Practical Theoretical Guide for Students and Education Practitioners.Jakarta: Bumi Literacy.

Asriani., Budiyanto&Nurdiana, A. (2016). Influence of Consumer Income Against the Consumption of Baronang Fish (Siganuscanaliculatus) in the Village Kambu Kendari City. Journal of Fisheries Socioeconomics, 1(3), 151-158.

Buchari Alma, 2004, ManajemenPemasaran Dan PemasaranJasa, cetakankelima, edisirevisi, Penerbit :Alfabeta, Bandung.

Fahrudin, A., M. A. Al Amin., T. Kodiran., A. Hamdani., A. Afandy., and A. Trihandoyo. (2015). Social Mapping in the Coastal Area of Gresik Regency. PKSPL-IPB Working Paper.

Ghozali, (2009), Analysis Application with the SPSS program. Publisher :Dipenogoro University. Semarang.

Halim, A. and M. S. K. (2013). Theory, Accounting Concepts and Applications Public Sector. Jakarta: Selemba four.

Handoko, T. Hani. 2012. Personnel and Human Resources Management.Yogyakarta. BPFE.

Hermawan, A., S. Amanah., and A. Fatchiya. (2017). Participation of Fish Farmers in Aquaculture Business Groups in Tasikmalaya Regency, West Java. Journal of Extension, 13(1): 160 – 176.

Isyanto, A.Y. (2012). Factors that influence the production of rice farming businesses in Ciamis Regency. CakrawalaGaluh, 1 (8): 1-8. sudarmuku.

Kotler, P. Amstrong, G. (2014). Principles of Marketing, 12th Edition, Jilid 1 Terjemahan Bob SabranJakarta :Erlangga.

Kottler, Philip & Kevin Lane Keller. 2007. Marketing manajemen. New Jersey : Pearson Prentice Hall.

Laksmidevi, N. &Purwohandoyo, J. (2018). Factors Affecting Production and Productivity of Fish Farming Ponds in the Minapolitan Area of Polanharjo District, Klaten Regency (Cases in Nganjat Village and Janti Village). Indonesian Earth, 7(2), 1-12.

Lestari, T. 2009. Conversion Impact Agricultural Land for Living Standards Farmer. Thesis. Bogor. Institute Bogor Agriculture.

Meilantina, M. (2013). Social Mapping: Study in the Kapuas Regency, Central Kalimantan Province. J-SEA (Journal of Agricultural Socio Economics), 8(1): 32 – 43.

Mungmachon, M. R. Knowledge and Local Wisdom: Community Treasure. International Journal of Humanities and Social Science. Volume 13, No.2, 2012: 174-181.

Mustopa, Z., 2011. Factor analysis which affects the transfer of functions agricultural land in the district Demak: Thesis. University Diponegoro, Semarang. Salatiga. Among Makarti Journal, Vol.5 No.9, July 2012.

Nurmalia, N., A Lutfiyanah., Minarni., A. Prastiyo., M.A.P. Putra., N. Darwita., W. Ayu. (2020). Increasing the Capacity of Fish Farmers Through Optimizing the Function of Group Learning Vehicles. Journal of Fisheries and Marine Extension, 14(3): 301–314.

Pandji, Anoraga and Widiyanti, Ninik. 2007. Cooperative Dynamics. Jakarta: RineksCipta and BinaAdiaksara.

Prahati, Zuhdi, S., &Aguswan. (2017). Counseling on the Preparation of Village Development Plans, in Kuapan Village, Tambang District, Kampar Regency. Dynamisa, 1(1), 94-99.

Purwati, endang. 2012. The Influence of Entrepreneurial Characteristics, Business Capital, Marketing Strategy on the Development of MSMEs in Dayaan and Kalilondo Villages,

Rahmatunisa, I., Darusman, D., and Widi, R.H.2021. The Influence of Pond Area and Selling Price on Black Prima Tilapia Growing Business Income. Agristan Journal. Volume 3, Number 1. Pgs 12 -25.

Rauf, A.H., 2010. Land Function Transfer Agriculture Becomes Land Sugarcane Plantations and Their Impact towards Rural Communities (Case Study of Social Change Farmers in Tolangohula District Gorontalo Regency). Dissertation,Gorontalo.

Ridwan, Zulkarnain. 2014. The Urgency of Village-Owned Enterprises (BUMDes) in Managing Village Economic Development. Journal of Law Science. Vol. 8. No. 3.

Rusli S. (2012). Introduction to Population Science. Jakarta (ID): LP3ES.

Saepudin E, Rizal E, Rusman A. 2017. The role of Posyandu as a maternal and child health information center. Record and Library Journal. 3(2): 201-208.

Sagala, S. (2008). School and Community Based Management: Strategies for Winning Quality Competition. Jakarta: NimasMultima.

Sari, I.P., Yulisman, & Muslim. (2017). Growth Rate and Feed Efficiency of Tilapia (Oreochromisniloticus) reared in Tarpaulin Ponds which are Fasted Periodically. Indonesian Swamp Aquaculture, Vol 5(1), 45-55.

Sembiring, S. (2009). Entrepreneurship Counseling to the Young Generation and Entrepreneurs In Order to Improve Community Welfare in Kiaracondong District, Bandung City.Abmas, 2(71), 3500.

Subandi, Slamet, 2007. Position and Action of Cooperatives in Supporting MSME Empowerment. Journal of Cooperative and SME Studies, Number 1.

Sugiyono. (2017). Quantitative Research Methods, Qualitative, and R&D. Bandung :Alfabeta, CV.

Sulaeman, A. (2014). The Influence of Wages and Work Experience on the Productivity of Carving Craft Employees in Subang Regency. TRICONOMICS, 13(1), 91– 100.

Suprayudi, M.A., Dimahesa, W., Jusadi, D., Setiawati, M. and Ekasari, J., 2011. Effects of crude supplementation sheep rumen fluid enzymes in protein source based feed plants on fish growthTilapiaOreochromisniloticus. Journal Indonesian Ichthyology, 11(2), pp. 177-183.

Swasta DH, Basu. 2018. ManajemenPenjualan. Yogyakarta: Penerbit BPFE.

Syamsunarno, M. B., Fatmawaty, A. A., Munandar, A., &Anggaeni, D. (2020). Community empowerment through aquaponic technology for self-sufficiency in Banyuresmi Village, Pandeglang Regency, Banten Province. Abdinus, 3(2), 329–341.

Ulfa, N., R. Hendri., Kusai. (2020). Fish Farmers' Perceptions of Tapah Fish (Wallagosp) Cultivation Business in Floating Net Cages in BuluhCina Village, Kampar Regency, Riau Province, Journal of Coastal Socioeconomics. 1(3): 49–57.

Widyaningsih, NurDewi. (2013). The relationship between the level of community education and community awareness in village development (Correlation Study in Temuwangi Village, Pedan District, Klaten Regency, 2009-2010). Educitizen, Vol 1(1), 69-77.

Yuliani, W. (2018). Qualitative descriptive research method in perspective guidance and counseling. Quanta, 2(2), 83-91.