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# **Information Needs and Seeking Behavior of Rice Farmers: A Case Study at Cengkong Village, Karawang Regency, West Java Province, Indonesia**

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## **Abstract**

*This study discusses about information needs and information seeking behavior of farmers in Cengkong Village, Karawang, West Java, Indonesia. The purposes of this study are to identify information needs and information seeking behavior of farmers in Cengkong Village. This research uses a qualitative approach with a case study method. The results show that the farmers in Cengkong Village able to identify and to express their information needs regarding to their activity. There are two kind of information needs: agricultural and non agricultural information needs. The result also shows that there are four type of information-seeking behaviors of farmers, including passive attention, passive search, active search, and ongoing search.*

**Keywords:** *Information seeking behavior, information needs, farmers, Cengkong village.*

## 1. INTRODUCTION

Information is needed by everyone to facilitate all aspects of their lives, such as work, research, satisfaction, spirituality and education (Sulistyo-Basuki, 2004). Every individual, group or organization clearly needs information as part of the demands of supporting their activities and meeting their daily needs. Nicholas (2000) stated that information needs are vital for performing jobs effectively, solving problems and taking part in hobbies; they, therefore, arise because of one's activities or work. The need for information becomes evident when people realize their lack of knowledge. To meet these needs, each individual will then need to find the information required.

In the process of finding information, all individuals need access to the specific information they need or want. Information retrieval is a process of activities conducted to obtain the desired information and needs (Yusup and Subekti, 2010). According to Mtega and Benard (2013), in fulfilling information needs, a person will try to find information through various media, such as books, magazines, social media, television or radio, as well as obtaining it through relatives, family or work colleagues. Wilson (1995) stated that activities in information seeking behavior depend on the information needs of each individual. The differences in such needs affect the various processes of finding information performed by each individual.

The purpose of this study is to examine the information needs and information seeking behavior of rice farmers in the village of Cengkong, Karawang Regency, West Java Province, Indonesia. Karawang Regency is the second largest rice producer in West Java. In undertaking their work, farmers in the village need information that can facilitate their agricultural work.

The process of finding information is influenced by the type of information needed by each individual; the greater the amount of information required, the more extensive the information searching process. The approach to information seeking behavior in this study is based on the related model of Wilson (1999). This includes *passive attention* (a person's behavior in not consciously intending to search for information, such as when listening to the radio or watching television; for example, when someone is watching television and the

program provides information related to their daily activities or profession); ***passive search*** (a person's behavior, in which he already knows what information is desired but not by specifically looking for it, which happens because the individual does not really care about the information desired and needed); ***active search*** (related to the behavior of a person who already knows what type of information is required, and is actively undertaking activities to find it); and ***ongoing search*** (in which someone has already obtained new information but needs to search further and in more depth; after the information sought has been obtained, it is processed and used in accordance with the individual's objectives in seeking it).

## **2. LITERATURE REVIEW**

Research on the information needs and information seeking behavior of farmers has been fairly extensive. Elly and Silayo (2013), in their study of the needs and information sources of rural farmers in Tanzania, found that as many as 70% of farmers' information needs related to crop and livestock husbandry, marketing, funding options and value addition. Dankwah and Hawa (2014) also elaborated the information needs of 160 cocoa farmers from four farming communities in the Oda, Asamankese, Kade and Nkawkaw districts in the Eastern Region of Ghana. Their research recommends the need to initiate an information literacy program for farmers in order to help them find the information required. Benard, Dulle and Ngalapa (2014), in their research on the information needs of rice farmers in Kilombero District, Tanzania, also suggest the need for collaboration between libraries, local governments and private organizations to develop documentation centers in rural areas equipped with the latest agricultural information sources.

In Indonesia, research about farmers' information needs, behaviour and resources have been conducted with various approaches. Tamba (2007) in her dissertation analyzed factors influenced the provision of agricultural informations and the empowerment of vegetables' farmers in Bogor, Cianjur and Bandung, West Java, Indonesia. She also proposed a model of agricultural information provision for vegetables' farmers. Far-far (2011) examined the information needs and the use of information resources by vegetables' farmers in Waiharu Village, Ambon, Maluku, Indonesia. His research shows that farmers prefer interpersonal communication channel for agricultural information, and followed by mass media.

However, research on information needs of farmers in Indonesia, especially in Karawang Regency, West Java is still limited. As explained before, Karawang Regency is the second largest rice producer in West Java, where it is expected that all the information needs of farmers should be met appropriately. Therefore, as previously stated, this study aims to identify the information needs of farmers and analyze the information seeking behavior of farmers in Cengkong Village, Karawang District, West Java Province, Indonesia in obtaining the information needed.

### 3. METHODS

This research is qualitative and uses the case study method. The research was conducted in Cengkong Village, Purwasari District, Karawang Regency, West Java Province, Indonesia. The region area is about 4,52km<sup>2</sup>. Demographically, the population of Cengkong Village in 2017 is 9,120, comprising 4,593 men and 4,527 women (The Central Bureau of Statistics, Karawang Regency, 2018). The informants were selected using the purposive sampling approach. The criteria for selection were that they were rice farmers in Cengkong Village, Karawang Regency, and had been worked as farmers for at least 5 years. Data collection was conducted through observation and interviews; the interviews were conducted using the local language (Sundanese) and bahasa Indonesia. The number of informants selected for the study was eight (table 1).

Table 1. Informants

No.	ID	Sex	Age (years old)	Working period (in years)	Land owned	Educational Background
1.	R1	Male	50	35	5 hectare	Elementary School
2.	R2	Male	52	23	500 m <sup>2</sup>	Senior High School
3.	R3	Male	54	30	5 hectare	Junior High School
4.	R4	Male	55	45	1 hectare	-
5.	R5	Male	55	30	300 m <sup>2</sup>	Unschooler
6.	R6	Female	47	33	-	Junior High School
7.	R7	Female	50	37	-	Elementary School
8.	R8	Female	55	35	-	-

#### 4. RESULT AND DISCUSSION

The research discussion is divided into two sections, namely discussion of the information needs of farmers, their information seeking behavior, and the obstacles encountered.

##### 4.1 Information Needs of Cengkong Village Farmers

Based on the results of the data collection, the information needs of Cengkong Village farmers can be categorized into two types, namely agricultural and non-agricultural.

##### Agricultural Information Needs

The first type of information needs of farmers in Cengkong Village is agricultural ones. These are necessary because they relate to their daily work. The following are interview excerpts related to such information needs:

*Yaaa butuh informasi mah banyak, tentang penanggulangan hama, cara memperbanyak hasil panen, tentang ukuran keasaman tanah, soalnya petani kan gak tau ini tanah udah asam apa belum, kondisi PHna udah berapa. Karena kan ada pengaruhna sama hasil tanem. Terus kadar air, air yg sehat buat taneman itu bagaimana. Kan sekarang udah meni banyak pencemaran, kayak pencemaran rumah tangga, pabrik kitu neng. (R1)*

*[I need lots of information, starting from pest management, how to improve crop yields, the level of soil acidity. I need this information because the farmers do not know whether the land where they planted is already acidic or not, and the condition of the PH in the soil. This affects the yield. Then I need information about healthy water levels; I need that information because now there is a lot of pollution, such as household and factory pollution.] (R1)*

*Yaaa informasina yaaa apa kalo airna kurang, cocok tanem, yaaa pupuk juga kan bapak bikin sendiri. Terus juga mah butuh informasi kesehatan padi, carana biar henteu aya uletna kitu neng, sama paling mah cuaca. (R2)*

*[I need the information about whether the water is lacking, then about farming, also about fertilizer. Then I need information about the health of rice so that there are no insects, and weather forecasts.] (R2)*

*Inpormasi ya butuh neng biar petani jugakan butuh inpormasi pupuk buat anu tanem, tractor buat di sawah kitu biar kita lancar kan neng jadi petani. (R3)*

*[Even though I'm just a farmer, I also very much need information on how to grow crops, and a tractor as a tool to help in the fields so that I can become a farmer smoothly.] (R3)*

*Apa ya neng, paling ya pupuk ya. Soalna kalo henteu pake pupuk meni jelek pisan padina. Terus anu ie teh buat hama itu juga sih bapak kadang suka capek banyak hamana. (R4)*

*[I need information about fertilizer. Because without fertilizer, rice yields will not be good. Then I need information related to drug pests because too many pests make you tired at work.] (R4)*

*Pokokna mah neng ya apa aja tentang yang di sawah, ya pupuk, ya obat. Soalna hama neng susah pisan atuh diilangkeun. (R5)*

*[I need any information related to rice fields, such as fertilizer and insecticides for pests. This is because pests are hard to get rid of.] (R5)*

*Ya perlu tentang pupuk harus berapa kali, yaa kalo pengetahuan tentang ngerawat padi biar meni bagus kitu gimana. Soalna mah kan kalo ngerawat padina gak bagus nanti mah hasilna juga jelek. Jadi hargana nanti murah kalo mau dijualkeun. (R6)*

*[I need information about the frequent use of fertilizers, and information about maintaining rice so that yields are good and prices are high.] (R6)*

*Inpormasi mah ya pupuk sama yang buat hama apa obatna kitu. Oohh ini sama cuaca paling mah takut kalo ujan gede ya jelek padina kitu. (R7)*

*[I need information on fertilizers and insecticides for pest removal, as well as information related to weather forecasts.] (R7)*

*Ibu teh butuh inpormasih mah butuh banget neng. Inpormasina ya tentang pupuk, cara nanem, obat meni hama ceunah. (R8)*

*[I really need information, such as on fertilizers, how to grow crops, and insecticides for removing pests.] (R8)*

Based on the results of the interviews above, it can be identified that the information needs related to agriculture in Cengkong Village include ones related to fertilizers, pest control, weather forecasts, how to grow crops, and the use of tractors. Besides being able to identify such needs, they have also been able to find the information required to answer problems related to agriculture. As stated by Wilson (2004), factors that influence information needs include individual and environmental factors, which include the work environment, social-cultural environment, political economy environment and physical environment.

### **Non-Agricultural Information Needs**

Based on the results of the interviews, it can be identified that the non-agricultural information needs of farmers in Cengkong Village include information on health, economy, insurance and education. This is evident in the following interview excerpts:

*Inpormasi selain pertanian ya pasti kesehatan, ekonomi buat dagang. Soalna ya begini dah neng abis bapak ke sawah, bantu istri buat dagang di warung. (R1)*

*[Information other than agriculture needs include health and business. Because after returning home from the rice fields, I help my wife in the shop.] (R1)*

*Iya sih yaa apa ya, paling buat istri saya tanaman tentang bunga soalna kan dia suka nanem bunga. Katana teh ada bunga yang bisa dimakan (edible flower) ya kitu, dia butuh informasi tentang itu. Saya teh henteu ngartos atuh neng masalah bunga jadina henteu bisa ajar istri saya. Sama pendidikan juga penting sih buat saya. Saya juga suka ikut pelatihan dari bank tentang asuransi masa tua. (R2)*

*[Non-agricultural information is needed about edible flowers for my wife, as she said that flower can be eaten. I do not understand about this, and therefore I need such information to tell my wife. Such information is equally important to me. I also like to take part on insurance training provided by local bank for the elderly.] (R2)*

*Asuransi neng, dulu mah kan ya ada asuransi kegagalan panen, dikasih sekian persen. Bayar per 6 bulan 65 ribu per-hektar. (R3)*

*[Insurance; there was insurance coverage for crop failure. We need to pay insurance premium, every 6 months 65 thousand IDR per hectare.] (R3)*

*Ya kesehatan butuh, keuangan juga butuh. Kalo sehat terus kan bisa ke ladang terus setiap hari, biar bisa cepet panen terus punya duit. (R4)*

*[Health information is needed, and also on finance. If you are healthy, you can go to the fields every day, so you can harvest quickly and have lots of money] (R4)*

*Kesehatan wae urang mah. Kan kalo sehat mah semuana lancar kitu. (R5)*

*[I just need information about my health. If the body is healthy, everything goes well.] (R5)*

*Tentang kesehatan mah butuhna, namana juga kan ya semakin lama mah atuh semakin tua. Takut sakit-sakitan makana ie teh butuh. Terus anu pendidikan ya itu mah buat anak penting biar pada pinter kitu neng.(R6)*

*[I need information about health because I'm getting older and older. I am worried that I will get sick. Then information about education for the children to get smart.] (R6)*

*Apa ya neng hehehe paling mah kesehatan wae lah. Abisna mahal pisan obat ya ibu mending pake tradisional wae.(R7)*

*[Maybe only health information. Because drugs are very expensive; for that reason, I choose to use traditional medicines only.] (R7)*

*Paling yaaa cara ngangon kambing neng. Biar pada cepet beranak gimana kitu. Sama keuangan wae lah biar uangna banyak. (R8)*

*[Maybe about the goats, in order to breed them. I also need financial information so I can generate greater income.](R8)*

These findings indicate that farmer not only needs information relating to their work but also to matters outside it. This is in line with Mtega and Benard (2013), who states that the information needs of farmers are different and varied and are not only limited to their work. The informants were able to identify and state their information needs other than agricultural ones necessary in their daily lives. This is in line with Chowdhury (1999), who argues that people's information needs, in general, vary greatly.

#### **4.2 Information Behavior of Cengkong Village Farmers**

The following section is based on Wilson's (1999) explanation that information seeking behavior is divided into four categories: passive attention, passive search, active search and ongoing search.

##### **Passive Attention**

Passive attention is an attitude of individuals who are not too concerned about the information needed (Wilson, 1999). Some informants mentioned that they were not really concerned about any information needed, so they tended not to look for it.

*Pernah bapak teh henteu sengaja lagi nonton tipi kan sama anak istri di depan pintu kitu. Eeehh aya berita tentang taneman hydroponic neng. Kan bapak teh selain padi juga tuh hydroponic juga, eeh ada inpormasina ditipi tiba-tiba. (R2)*

*[I was once watching TV with my wife and children. There was news about hydroponic plants. The thing is, besides planting rice, you can also grow hydroponically.] (R2)*

*Kadang ya kan suka ngajarin anak pelajaran IPA, ada tentang tanem-taneman kitu dibukuna. Saya suka engeh, ooo ada inpormasina juga tentang padi didie teh. (R7)*

*[Like teaching children science lessons, there is information about plants in the science book. I realize that there is information about rice in this book too.] (R7)*

Five out of the eight informants stated that while they were watching television, listening to the radio, or talking with friends, they obtained the information they did not need, but which they accidentally received. During the interview process, the three other informants

said that they had never experienced passive attention. This was because they were busy with their daily farming activities, so they did not have time to watch television or listen to the radio.

### **Passive Search**

Passive search describes an individual's attitude where they need information, but do not search for it in detail. It is linked to passive attention, in which individual responses or attitudes are less concerned with the information needed (Wilson, 1999).

*Kalo inpormasi mah henteu langsung ibu cari neng. Mau cari lewat apa? Tunggu ada yang ngasih inpormasi aja ibu mah. Apalagi ibu teh henteu bisa baca. Jadina mah mending nanti wae lah dicari lagi. (R8)*

*[I'll try to find the information needed later. I'll wait someone to provide information for me. Moreover, I cannot read. So, later I will find information] (R8)*

*Inpormasi mah kalo henteu butuh ya henteu dicari, kalo butuh ya baru dicari neng. (R5)*

*[If I don't need information, I don't look for it. If I need it, then I look for it.] (R5)*

Based on the interview result, it can be concluded that four out of the eight informants made passive searches for the information they needed. They said that if they felt the information they needed was not too urgent, then they did not look for it quickly. This passive search also occurs because they feel that the information they have is sufficient to fulfil their daily lives. The other four informants said that if they felt they needed information, they immediately sought it.

### **Active Search**

Active search refers to the attitude of an individual who, if they already know what information is required, directly search for various sources (Wilson, 1999).

*Bapak teh kalo butuh inpormasi tentang hama, pupuk, PH tanah langsung buka buku, majalah trubus. Jadi mah kan ya biar langsung ketemu inpormasina tuh ya lewat situ. (R1)*

*[If I need information on pests, fertilizers or soil PH, I will immediately read a book or a magazine, so I will immediately find the information required](R1)*

*Selama butuh inpormasi tentang di sawah ya langsung dicari sama bapak. Biar gak bingung nanti diladang. Kan kalo udah punya ilmuna ya enak ngeladangna. (R3)*

*[As long as I need information about the field directly, I will look for it. As long as I have the knowledge, it feels good to farm.] (R3)*

Four out of the eight informants made active search for the information they need. This is because if they felt a lack of information or a peculiarity, they actively sought relevant information through various sources. The other four informants said that if they needed information, but not urgently, then the information needed was not immediately sought.

### **Ongoing Search**

Continuous search is when new information has been obtained by individuals and will continue to be sought in more detail and depth, meaning the information will become continuous learning (Wilson, 1999).

*Bapak kan cari inpormasi yaa alesan biar sukses kitu, biar henteu aya hambatan di sawah, biar kan nanti kalo ie panen kan hasilnya bagus. Makannya teh kalo bapak ngerasa butuh informasi, langsung cepet cari wae kitu. (R1)*

*[I am looking for information so that I can be more successful in cultivating the fields so that the harvest results will be better. Therefore, if I feel I need information, I just look for it immediately.] (R1)*

*Langsung bapak cari neng kalo butuh inpormasi mah. Dari pada bingung kan yaudah langsung dicari wae. Soalna yaaa menurut bapak semua inpormasi itu berguna banget lah, berguna sekali. Apalagi ini kan buat usaha juga, untuk dimakan sendiri juga. Apalagi butuh sayur, butuh beras mah ambil wae di lahan gak usah beli. Bisa*

*bapak kasih tau juga ke anak sama istri tentang inpormasi-inpormasi apa wae yang bapak tau mah neng. (R2)*

*[If I need information directly, I will look for it. For me, all information is very useful. Moreover, this is not only for our business but also for our consumption. Especially when we need vegetables or rice, we can just take it on the land so we don't need to buy it. We can teach it to your children and wife about it.] (R2)*

*Kalo bapak sih ya meni langsung dicarikeun wae, soalna kalo ditunda-tunda mah kan gak baik kan. Soalna bapak mah kan cari inpormasinya biar cepet panen neng. Kalo cepet panen cepet dapet duit, biar bisa muter modal buat bel pupukna lagi, beli obatna lagi, beli bibitna lagi. (R3)*

*[I will immediately search for information without delay. In my opinion, it is not good if you postpone it because you may be looking for information so that the rice can be harvested quickly. If you harvest quickly, you will get money quickly, so you can reinvest capital to buy fertilizer, medicine and seeds again.] (R3)*

Three out of five informants finding the information they needed on an ongoing basis. This was subject to several factors related to farmers who undertake sustainable information seeking, which includes its being a means of providing knowledge for their families and offspring, making knowledge provision for themselves and making their farming businesses improve.

All the informants had various reasons for their information seeking behavior, all of which influenced their behavior towards their way of finding information to suit their needs, be it for their work, general information, or for their daily environment. This is in line with Wilson (2002), who states that there are certain factors that influence the information needs and information seeking behavior of each individual, including the physiological, demographic, role or work of each individual, environment, and characteristics of information sources.

From the results of the research on the information seeking behavior of farmers in Cengkong Village, it can be concluded that not all of them actively seek the information they need. However, there were also informants who stated that if they needed information,

either agricultural or general, they immediately searched for it from several sources. In addition, some informants also identified to obtain more in-depth information about what new things that attract their interest.

## **5. CONCLUSION**

The conclusion of the research on the information needs of farmers in the village of Cengkong is that these needs are divided into two types: agricultural and non-agricultural. Information needs on agriculture include how to grow crops, fertilizers, pesticides, weather forecasts, pH levels in the soil, water content in the soil, and tractors. On the other hand, non-agricultural information includes health, medicines, work insurance, health insurance and education. In this case, farmers have been able to identify their information needs and to state their needs in order to facilitate their work. In addition, they have also been able to identify and state information needs other than agricultural ones needed in their daily lives. In the process of finding information by the farmers, there are different approaches for each individual, which is influenced by their backgrounds. There are four types of information seeking behavior among the farmers in Cengkong Village, namely passive attention, passive search, active search, and ongoing search. Not all the farmers actively sought the information they needed.

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