

# Risk Communication of Chili Farmers, Case of Genteng Village Farmers, Sumedang District, West Java

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**Abstract:** *This paper aims at identifying the communication approach needed for chili farmers in an effort to minimize the risk of chili farming, using the case of farmers in Genteng Village, West Java Province, Indonesia. Departing from the issue of the importance of increasing the capacity of chili farmers to reduce their agricultural risks, this paper intends to elaborate qualitatively on main issues in risk of chili cultivation that are information that is an orientation for understanding the risks of chili farmers; and risk communication practice among chili farmers. The main finding of this research is chilli farmers in Genteng Village, Sumedang Regency have tried to overcome various risks in their agricultural businesses, through efforts to understand all risks in chili farming. Information about the risks of chili farming flows between farmers, groups and extension institutions. There has been communication with various parties and manage those risks in groups. Nevertheless, a systematic risk communication did not exist that hinder farmers to effectively address the risk in chili farming.*

**Keywords:** *Chilli Farmers; Risks of Production; Risks Communication; West Java.*

## I. INTRODUCTION

In Indonesia, one of the many agricultural crops in plants is chili, which is a temperature sensitive plant. Chili is one of the food commodities which often affects the increase in national inflation, besides rice<sup>(1)</sup>. Chili cultivation has a high economic value due to the high demand from the community and the need for industrial raw materials. As a food staple in Indonesia, the increasing need for primary chili yields change the behavior and thinking of farmers about the importance of optimizing chili yields.

The problems surrounding chili occur during production, logistical and distribution stages. Farmers in general are more involved in the production stage. One of the main challenges of farmers at the production stage is the need for an efficient and effective approach in cultivating chili farming to produce optimal yields. This includes reducing the risk of failure of chili farming. Climate change is the latest challenge for chili farmers, because the risk of production is increasing and further adding to uncertainty<sup>(2)</sup>.

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Risk communication is the process of exchange of information and views on risk and factors related to risk<sup>(3)</sup>. This paper tries to identify the communication approach needed for chili farmers in an effort to minimize the risk of chili farming, especially for farmers in Genteng Village, Sukasari District, Sumedang Regency, West Java Province. Departing from the issue of the importance of increasing the capacity of chili farmers to reduce their agricultural risks, this paper intends to elaborate on two main issues in risk of chili cultivation that are information for understanding the risks of chili farmers; and risk communication practices among chili farmers.

## II. LITERATURE REVIEW

Risk communication is a study that has been formally developing for the last 25 years. Various definitions have been put forward related to risk communication. Risk Communication is the process of communication between professionals who carry out risk assessments and risk management with workers in terms of occupational or community exposure to environmental exposure<sup>(4)</sup>. Risk communication also incorporates elements of conflict resolution, public participation and two-way messages<sup>(5)</sup>. Conceptually, Risk Communication is often associated with events that are expected through the results of discussion of behaviour<sup>(6)</sup>. A broader definition of risk communication is not only the exchange of information and opinions via risk analysis on risks and their properties, but also perceptions on risks among stakeholders<sup>(7)</sup>. As an interaction process, the active role of the community in risk communication becomes very important. The principle of involving the community in terms of risk, whether it is risk assessment, decision making, management or communication, marks one of the important differences in risk communication<sup>(8,9)</sup>.

The current global climate change is causing risks and uncertainties as well in agriculture sector. Climate information can help agriculture in formulating management decisions that protect from uncertainty and risk<sup>(10,11)</sup>. Risk communication can be applied to overcome global climate change and agricultural management techniques that can have negative impacts such as excessive use of pesticides<sup>(12,13)</sup>. Risk communication which is an interaction process is very dependent on various factors in the process of information transfer. There are four factors that need to be considered in

risk communication related to how information is communicated and how communication is received, namely the target audience, the messenger, the message itself, and the media to transfer messages<sup>(13)</sup>. It is very important to adjust the content and process of communication with the interests and concerns of various social groups as audience, so that risk communication must be in line with the existing culture<sup>(14)</sup>.

The study of messengers focusing on trust problems shows that the effectiveness of communication increases with increasing trust in communicators that among others contributed by competence of the messenger<sup>(13)</sup>. Competence is needed to help insight into audience perceptions of risk, consumer behavior and determinants of trust<sup>(15)</sup>. Leaders have an important role in influencing other actors and accelerating the spread of information in a system<sup>(16)</sup>. Then the messenger who can act as a leader needs to be prepared as well as possible both in competence and capacity before starting the risk communication process in the field.

Risk communication involves various interested parties, therefore the risk information must be transparent, so that all parties know the risk information. Message recipients are heterogeneous, with various audience characteristics. Therefore, the risk message must be adjusted to different targets<sup>(15)</sup>. In general, the public gets information about a problem from the media, but sometimes the mass media does not accurately, and details inform about risks. Conventional risk communication will not succeed by itself and a more innovative and creative communication strategy is needed to engage with consumers using all available media channels openly and transparently<sup>(13,15)</sup>.

Risk communication in each case has different strategies according to the characteristics of the problem or risk. In research related to risk communication networks it is found that farmer group managers have an important role in the process of risk communication<sup>(16)</sup>.

In other study it is also revealed that media acquisition was the most decisive factor in getting the benefits of communication and facing disaster risks<sup>(17)</sup>. This is in line with what has been indicated that information media is one of the important factors in risk communication<sup>(13)</sup>. In Indonesia risk communication is still a dominant problem because risk management is often hampered by the gap in risk perceptions in society and government. In general, the characteristics of farmers have a low level of education or literacy. This has an effect on farmers' perceptions of a problem<sup>(18)</sup>. Based on these conditions, risk communication in Indonesia will be more effective and efficient if the following factors can be better prepared, namely audiences/society, the messenger, the message, and the media.

### III. METHODOLOGY/MATERIALS

The method used in this research is descriptive qualitative analysis method. The analytical method used in exploring data is content analysis, which plays a role in finding patterns, relationships, and word structures in an information. The object of this study was Genteng Village

Farmer Group in Genteng Village, Sukasari District, Sumedang Regency, West Java Province. Data and information are collected in the field which are mainly primary data and information are collected by in-depth interview methods with staff and administrators from the Farmers Group, which amounted to 53 farmers. In addition, field observations were also conducted to find detailed information about chilli farming in Genteng Village. The whole stage of research was done on February 2018 for 2 months. Information collected is mainly information on threat of cultivation chilli, and how they communicate problem together that is with interested parties.

### IV. RESULTS AND FINDINGS

Based on information from farmers, the main threat in chili cultivation is the nature of chili plants which are very susceptible to pests and diseases. Pests that often attack chili plants are fruit flies and aphids, while diseases that often attack chili plants are rotten fruit caused by fungus, leaf spots and frizzy leaves, anthrax caused by fungus. Understanding of physical conformity also according to farmer groups is important to be understood carefully because for example the influence of low or high land will affect the speed of growth. Selection of seed varieties is also important because it yield's is influenced by the selection of seeds. Only prime seeds are being planted by farmers' groups in order to obtain optimum yields.

From the issues discussed in interview, farmer mention as well about climate change. In the production process they face up increasing financial risk because the threat of failed production as the consequence from the attack from pest and disease. They have not yet obtained the right information for resolving more and more variation and amount of pest and disease on chili plant among others withered fusarium, withered bacteria, fleas' leaf chilli, *anthracnose*, and root mace. They only notified by source information that climate change makes various diseases easier to growing and developing. Information is a key factor for people facing disaster risk<sup>(13,17)</sup>. This can cause farmers unable to anticipate and overcome problems in chili plants, so the potential for crop failure is higher.

Various problems faced by the chili farmer in the Genteng village has been instinctively raises communication for various problem and looking for settlement together. Although it has not been structured pattern and the communication process risk has run, however it could be identified some activity communication risk among farmers. Communication happens not only horizontally occurs between fellow member in one group but also with member groups outside group farmer informally. Communication with external party for example with institutions of government, university and also vendors, many are performed by group formally through formal interaction or represented by administrator in the name of the group.

Existence of intense communication with various parties in the area of study show that the goals of communication risk are implicitly or partially

occurred although not fully achieved for every communication risks objective. But at least in part or even in bigger part have been achieved. The aim of communication risk to promote concern and understanding issues specific from the analysis process risk, and exchange swap information (two ways communication) between parties interested with analysis risk, at least has begun and to be a good start in communicating risk between stakeholder of the chili farmers in the region.

The aims of communication risk to fix effectiveness and efficiency of the risk analysis process; and to promote consistency and transparency in implementing decisions risk management too reveal that results of the communication can give away solution especially seen from measures agreed for control the risk. Successful advice formulated by group farmer for control risk including identification source of pest and chili disease; alternative planting media; modifying processes, activities, and materials that are safe; and organizational control aspects in a manner that integrate in between group farmers and the government. An achievement passable for size group farmers in the countryside.

In addition, there are two approaches as part of efforts in risk management for chilli farmers in Genteng Village, Sumedang, namely the preventive approach and curative approach. The preventive approach is carried out with routine and planned maintenance starting from the nursery, planting, until harvesting. This is done by routine and periodic weeding, as well as treatment only when attacked by pests using vegetable pesticides so that reduce risk danger for health from pesticides. While the curative approach is done through trimming, burning or burial in the soil for plants affected by pests or diseases.

Factors that determine the success of risk communication for chilli farmers in Genteng Village, Sumedang District include credibility of information sources, feasibility of information to be trusted, accuracy and completeness of information, and timely delivery of information. Meanwhile, effective communication media used are mobile phones and social media. Those tools also make it easier for agricultural extension officers and the Agriculture Service Office of Sumedang Regency to carry out monitoring and assistance, dissemination of information and updating information to optimize handling in an emergency.

## V. CONCLUSION

In essence, chilli farmers in Genteng Village, Sumedang Regency have tried to overcome various risks in their agricultural businesses, through efforts to understand all risks to chili farming, communicate with various parties, and manage those risks in groups. Information about the risks of chili farming flows between farmers, groups and extension institutions as an institution that can be trusted by farmers. At present, social media and information technology devices are being used as a search media and risk information exchange. Finally, efforts to manage risk through identification, analysis and evaluation have been carried out though less systematic it still requires an increase in its

implementation.

Besides for the benefits of farmer, communication risk is expected to improve understanding and bear it public sector answer in identify, analyse and evaluate practice of chili cultivation so that they could take decision right in helping the farmers reaching optimal production. Support for communication media is also very important in increasing farmer awareness regarding the risks of climate change, as well as the introduction of alternative information media so that the delivery of messages can be quickly and precisely in the process of risk communication. Only with that, stability of chili as a commodity could be guaranteed so that chili will no longer become political commodity and does not disturb the economy.

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