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Developing Insurance Scheme for chili and Shallot

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INTRODUCTION

Chili (*Capsicum annuum L)* and shallot (*Allium ascalonicum L)*are two strategic horticultural commodities that affect the Indonesian economy as their uncontrollable prices could influence the national inflation rate. The unpredictable climate change could, to some extent, contribute to their technical cultivation and hence their productivity leading to massively fluctuation of their supply and affecting the volatility of their prices.

Anticipative actions are being implemented, including the application of appropriate innovations to reduce the impact of significant fluctuation of production and price in the market. In this regard, keeping a consistency in distribution to meet a steadily increasing consumer's demand should be well maintained. Sufficient amount of supply of these two commodities to modern and traditional markets could help stabilize the prices and reduce their substantial impact on the national economy.

In the effort to increase production, a program to shield the farmers from great losses due to harvest failure caused by many unwanted events is highly required. Insurance scheme for chili and shallot is introduced to protect the farmer's interest. This allows the farmers to keep their farm activities free from unavoidable circumstances and let the insurance take care of payment on the financial losses due to certain infestations that cause crop damages and eventual harvest failure. With certain terms and conditions, the insurance scheme for chili and shallot could be well applied for the benefit of the farmers.

Framework of analysis

Agricultural insurance is one of the programs to protect the farmers according to the Law No.19/2013 on Farmer's Protection and Empowerment. Therefore, the implementation of chili and shallot insurance should be considered as not only the manifestation of the law to carry out in favor of the farmers, but also to help the government to maintain higher production and meet the increasing demand trend of chili and shallot. The study on this insurance scheme was conducted in several provinces, namely West Java, East Java, North Sumatera, and West Nusa Tenggara. Data and information were collected from the farmers

through individual interviews and group discussions as well as from local government and other related stakeholders.

Insurance coverage level and premium rate

The two commodities have different characteristics, particularly during harvest time. Shallot could be harvested within 65-70 days after planting. Chili has far longer harvest period, up to 6 months with about 2 weeks of harvest interval. Therefore, the implementation of insurance should be specifically prepared for each of the commodity. With substantial cost of production of these commodities, an insurance scheme is worthy to be implemented to cover the risk that might occur and help the farmers from significant losses due to certain events.

The insurance should cover risks caused by flood, drought, and pests and diseases infestations. Pests and diseases that commonly occur in the region should be well named and well recognized by the farmers. The damage of commodities due those abovementioned causes that could lead to harvest failure should be listed in the insurance coverage.

To meet the need of the farmers to cover their commodities through insurance scheme, they have mentioned to start the risk coverage up to 50% of the total cost of production. The farmers agreed to the level of the effective average cost of production at IDR 80 million (USD 6 thousand)/ha and IDR 60 million (USD 4.5 thousand)/ha for chili and shallot, respectively. These means that the insurance coverage level for chili would be IDR 40 million (USD 3 thousand/ha and IDR 30 million USD 2.25 thousand/ha or shallot. These are the basic values of insurance coverage approved by the farmers. The farmers also agreed to apply 1% of the IDR 40 million (USD 3 thousand) as the premium rate, i.e. IDR 400 thousand (USD 30)/ha and IDR 300 thousand (USD 22.5)/ha for chili and shallot respectively. The farmers also mentioned that their insurance scheme should not be far from the insurance scheme for paddy in term of premium subsidy and claim mechanism. They also raised the need to close the insurance through such claim mechanism when the plant reaches 60% of damage.

The use of technology in chili and shallot insurance scheme

The use of certain technology to increase the accuracy of measurement activity (area, pest and disease detection, etc.) is expected to support the implementation of the chili and shallot insurance scheme. It is well understood that the farmers have only small areas to cultivate these commodities and even use the same plot at the same time to grow other seasonal commodities (multi cropping system). To anticipate the accuracy of data and information on the area used for chili and shallot at the specific parcel, plot, and season, the use of certain tool is highly required. GPS or drone could be very helpful to clarify various required data and information, including the planted area for chili and shallot at specific locations.

The accuracy of data and information is highly recommended to avoid any disputes in, particularly, insurance claim. The planted area should be clearly written down in the policy paper and in the claim proposal when there is materialized risk. Other information about the plant, such as the change of plant color following the duration of planting time or caused by certain pests and diseases could also be detected, although its accuracy level should be further investigated. Drone, furthermore, could be used to determine the exact size of the planting area. The accuracy of measurement should lead to mutual benefit when the farmers, particularly, submit a claim form due to the damage of the plant. This study revealed that the issuance of insurance policy should be based on the correct size of insured plant. Drone can help to provide a highly accurate information of planting area for insurance and should help

the farmers and the insurance company to perform good implementation of insurance scheme.

CONCLUSION

Farmers have shown their enthusiasm to protect themselves from farm risks through the implementation of an insurance scheme. Chili and shallot are two important commodities that could affect the national economy when their supply could not meet the demand in the markets. In this case, the production of domestic chili and shallot should be well maintained and the farmers need to be protected from great losses due to plant damage and harvest failure. Farmers who cultivate chili and shallot are entitled to be protected from the possibility of farm risks caused by flood, drought, and or specific pest and diseases.

The farmers agreed to pay part of the premium value to obtain certain level of insurance coverage. It is suggested that the government could also provide premium subsidy just like that of the rice crop insurance scheme. Following this rice crop insurance, it indicates that the farmers will pay the premium rate at IDR 400,000 (USD 30)/ha and IDR 300,000 (USD 22.5)/ha for chili and shallot respectively (1% of the 50% of the average cost of production of each commodity). The government may decide certain amount of premium subsidy in addition to these farmer's level.

The use of certain technology as tools to increase the accuracy of data and information is also required. The use of GPS or drone is suggested to provide accurate data and information about size of area planted, detection, of plant damage, etc. The insurance company is highly recommended to provide many options of technology to maintain high performance of agricultural insurance program.

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