

Analysis of Implementation of Rice Farming Insurance: Case Study In Indonesia

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Abstract

Since 2015, the Indonesian government has been running rice farming insurance in a national scale. This insurance product provides cover for crop failures caused by flood, drought and plant pest organisms attack. The government has appointed PT Jasa Indonesia (Jasindo) Insurance, state-owned insurance known as strong in the retail segment to provide insurance cover for rice farmers. Rice farming insurance provides a maximum compensation of Rp 6 million per hectare per planting season, in case of crop failure. The total premiums to be paid Rp. 180,000 per hectare per planting season. The government bears 80% or Rp.144.000 per hectare per planting season, while farmers bear 20% or Rp. 36,000 per hectare per planting season. The government targets 1 million hectares of land to be covered by insurance rice farming, and so far has not been achieved. Up to May 2016, there were only about 23.7% of the land that has been successfully insured or a new approximately 237,036.19 hectares. Insurance marketing of rice farming is also stymied a shortage of human resources (HR), despite getting help from the Indonesian army personnel. This study aims to analyze the implementation of rice farming insurance provided by PT. Jasa Indonesia (Jasindo) Insurance. The study was conducted using in-depth interviews and data from PT. Jasa Indonesia (Jasindo) Insurance, Indonesia Ministry of Agriculture and Indonesia Central Bureau of Statistics. There are some obstacles predominantly on marketing side such as : lack of qualified manpower, uncertain spending on resources, inadequate resource for data collection, widespread coverage, traditional loss coping mechanism, poor perception of insurance, low insurance minded. Then subsequently made the development strategy for marketing rice farming insurance in the future and as an alternative improvement for PT Jasa Indonesia (Jasindo) Insurance.

Keywords : rice farming insurance, crop insurance in indonesia

1. Introduction

The agricultural sector is one sector which has an important role in the national economy. The role of the agricultural sector such as the supplier of food to the people, the source of national income, employment opportunities, sources of investment, as well as foreign exchange when agricultural products exported to other countries. Agricultural sector contribution to GDP in Q2 2016 reached 14.32%. Sectors with the largest contribution to GDP is the manufacturing sector, which amounted to 20.48%. On the other hand, the agricultural sector faced with the risk of uncertainty is quite high and farmers over the years bear the risk of these uncertainties all by themselves.

The role of the agricultural sector did not attract the attention of the government to achieve food sovereignty. Some government policies to be taken to achieve this goal include: repair damaged irrigation and irrigation networks in three million hectares of rice fields, supplying one million hectares of new rice fields outside Java island, the establishment of banks of farmers and SMEs, as well as warehouse facilities post-harvest processing in each production centers.

Rice is one of the agricultural products which is a food most consumed by the people of Indonesia compared to other foodstuffs. Based on Central Bureau of Statistics Indonesia in 2013, the five foods with an average consumption per capita is the largest year include: rice, sugar, onion, red pepper and ground coffee. The average consumption per capita a year of rice in 2013 amounted to 85 514 kg. Meanwhile paddy land area in 2013 amounted to only 13.77 million hectares with rice production amounted to 70.87 million tons (Central Bureau of Statistics, 2013). Seeing these data, should the needs of the domestic rice can still be fulfilled.

The level of welfare of farmers have tended to be below the poverty line. Farm family income is estimated to approximately Rp 500 thousand per month, so the problem of poverty farmers a crucial issue (Sunarti et al.,

2011). In addition, farmers also have to bear the risks of climate change are uncertain which affect the production of agricultural products and the risk of natural disasters such as floods, droughts, pest attack risk in addition to market price volatility that ultimately hurt farmers.

In an effort to maintain rice production and availability of staple commodities of rice, the insurance can be an alternative to the transfer of risk, especially for the risk of crop failure. Agricultural insurance is offered as one of the funding schemes relating to the distribution of risk in farming activities. If we compare the implementation of agricultural insurance in the world, the current total premium income earned from agricultural insurance reached US \$ 24.31 billion or equivalent to Rp. 291 Trillion.

2. The Concept of Rice Farming Insurance

Almost all Indonesian people have heard the word 'insurance'. Some of them even have to understand that insurance is self protection (assets) are indispensable. But most people are still confused, when talking further about insurance. In fact, of the 250 million population of Indonesia was not until the third that had an insurance policy. In general, this phenomenon is not caused by a lack of information and the dissemination of the importance of insurance on them, but because they are still puzzled how an insurance product that works to preserve and protect a person's financial occurs when unwanted things happened. Public awareness for insurance in Indonesia is low. Until now insurance literacy levels of Indonesian society range from 17.84 percent, while the utility rate of about 11.81 percent. This suggests there are approximately 6.03 percent of Indonesian people who, though already understand the importance of insurance, not to use insurance services (Widiastuti, 2015). If this condition continues, of course, the people of Indonesia that is still dominated by the middle to lower, potentially falling into poverty in times of disaster.

The rice farming insurance pilot project has implemented the first phase of the planting season in October 2012 to March 2013 in the region of South Sumatra (OKU District East) and East Java (Tuban and Gresik). The rice farming insurance pilot project first phase of the targeted area of 3000 hectares, but only realized an area of 623.12 hectares. The parties involved in this trial is a state-owned company PT Semen Gresik, PT Pupuk Kujang and PT. Pupuk Sriwijaya. The insurance company appointed by the government to implement this program is PT. Asuransi Jasa Indonesia (Jasindo) with the involvement of the Ministry of Agriculture. The trial insurance rice farming this first stage provides insurance coverage for rice crops in areas in three provinces (South Sumatra, West Java and East Java). Financing of this insurance program came from Corporate Social Responsibility (CSR) funds the above state-owned companies. The rice farming insurance pilot project in Karawang, West Java is said to be not successful because no farmers who are interested in rice farming insurance. This is because farmers had never experienced crop failures that do not require insurance, and farmers have to pay insurance premiums amounting to Rp 36 thousand per hectare (20% of total premiums) are perceived peasant quite burdensome. In 2015, the Indonesian government desire to run the rice farming insurance with a larger scale. The government appointed PT Jasa Indonesia (Jasindo) Insurance, state-owned insurance known as strong in the retail segment to provide insurance cover for rice farmers.

Rice farming insurance in 2015 until today provides a maximum compensation of Rp 6 million per hectare per cropping season, when crop failures happened. The total premiums to be paid Rp. 180,000 per hectare per cropping season. The government bears 80% or Rp.144.000 per hectare per cropping season, while farmers bear 20% or Rp. 36,000 per hectare per cropping season. Target 1 million hectares of land by the government to be covered by insurance rice farming has not been achieved so far. Up to May 2016, there were only about 23.7% of the land that has been successfully insured or approximately 237,036.19 hectares. Insurance marketing of rice farming is also stymied a shortage of human resources (HR), despite being helped by the personnel of the Indonesian army.

3. Literature Review

Insurance define as coverage by contract whereby one party undertakes to indemnify or guarantee another against loss by a specified contingency or peril. Insurance is also defined as the equitable transfer of risk of loss from one entity to another, in exchange for a premium (Birds, 2004). **The important principles of insurance are as follows:**

3.1. Principle of Insurable interest

Under this principle of insurance, the insured must have interest in the subject matter of the insurance. Absence of insurance makes the contract null and void. If there is no insurable interest, an insurance company will not issue a policy. An insurable interest must exist at the time of the purchase of the insurance. For example, a creditor has an insurable interest in the life of a debtor, A person is considered to have an unlimited interest in the life of their spouse etc.

3.2. Principal of utmost good faith

Under this insurance contract both the parties should have faith over each other. As a client it is the duty of the insured to disclose all the facts to the insurance company. Any fraud or misrepresentation of facts can result into cancellation of the contract.

3.3. Principle of indemnity

Indemnity means security or compensation against loss or damage. The principle of indemnity is such principle of insurance stating that an insured may not be compensated by the insurance company in an amount exceeding the insured's economic loss. In type of insurance the insured would be compensated with the amount equivalent to the actual loss and not the amount exceeding the loss. This is a regulatory principle. This principle is observed more strictly in property insurance than in life insurance. The purpose of this principle is to set back the insured to the same financial position that existed before the loss or damage occurred.

3.4. Principle of proximate cause

Proximate cause literally means the 'nearest cause' or 'direct cause'. This principle is applicable when the loss is the result of two or more causes. The proximate cause means; the most dominant and most effective cause of loss is considered. This principle is applicable when there are series of causes of damage or loss.

3.5. Principle of subrogation

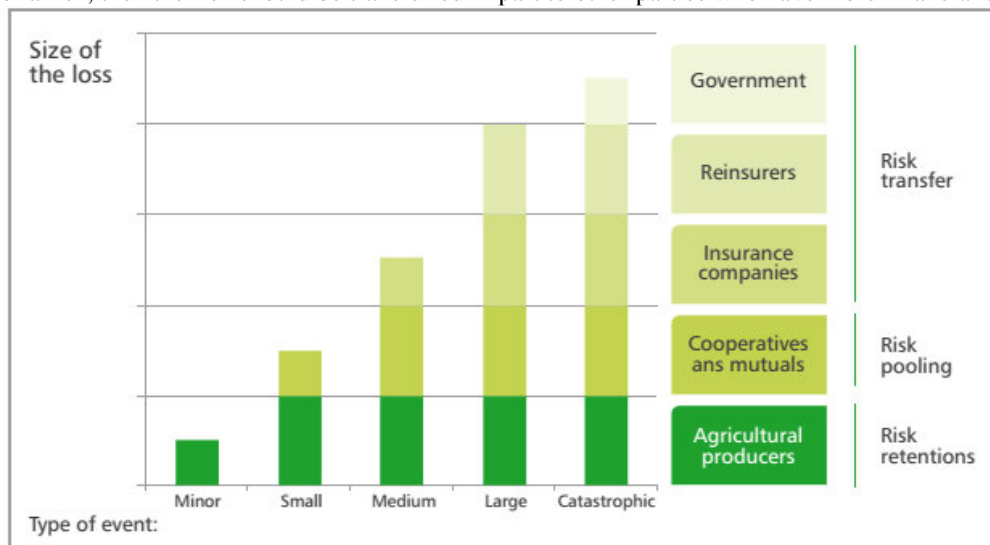
The principle of subrogation enables the insured to claim the amount from the third party responsible for the loss. It allows the insurer to pursue legal methods to recover the amount of loss, For example, if you get injured in a road accident, due to reckless driving of a third party, the insurance company will compensate your loss and will also sue the third party to recover the money paid as claim.

3.6. Principle of contribution

Contribution is the right of an insurer to call upon other similarly, but not necessarily equally, liable to the same insured to share the cost of an indemnity payment. This principle is applicable when there are two or more indemnity policies covering the same peril and subject matter. It is of utmost importance that the policyholder will inform the insurer of any other insurance in force otherwise, all benefits under this policy shall be forfeited. In such a case the claim payment is shared amongst the insurers: the company shall not be liable to pay or contribute more than its proportion of such loss or damage. If the policyholder holds more than one policy of insurance, he still cannot recover more than full indemnity.

4. Agricultural Risk Layering

Figure 1 shows the mechanism of risk spreading in accordance with the scale of losses. The greater the severity of a risk, then the risk should be transferred in part to other parties who have more financial strength.



Source : Mahul and Stutley 2010

Figure 1 Agricultural risk layering

The types of agricultural risk mechanisms implemented by agricultural farmers vary by country. The management of agricultural production risks relies on an optimal combination of technical and financial tools. The risk-layering concept is useful for analyzing the optimal combination of technical and financial risk management tools in agriculture. Farmers can retain small but recurrent losses through the use of appropriate on-farm risk mitigation techniques (for example, irrigation and pest prevention) and self-insurance tools (for example, savings and contingent credit). More severe but less frequent non systemic losses can be pooled into cooperative or mutual insurance schemes. However, the relatively severe and frequent systemic losses, which cannot be managed through either on-farm risk management mechanisms or a cooperative or mutual insurance scheme, need to be transferred to commercial insurers and reinsurers. Governments have a large role to play in major disasters, acting as reinsurers of the last resort or providing post-disaster aid (World Bank, 2010).

The biggest challenge for agricultural production arising from climate change which leads to the accumulation of extreme weather disasters, especially drought, floods and hurricanes. The agricultural production in Asia is expected to decline by 15% to 20% by 2050 due to drought. The threat of climate change on agricultural production globally, will result in small-scale farmers in developing countries can not overcome the negative effects of the weather, so the need for risk management instruments to face the threat. Rural communities depend on the business of farming life. In the event of crop failure due to extreme weather, they risk the loss of expected income and poverty. Agricultural insurance provides financial compensation due to damage / failure of the harvest so as to stabilize revenues and avoid peasant households from poverty. In addition, agricultural insurance had a positive influence towards investments that contributed to agricultural productivity. Reducing the risk of economic loss through insurance will encourage the interest of farmers to use new technologies and technical farming better.

Agricultural insurance is the instrument of risk (risk pooling instrument) where each participant pays a small amount of the premiums and most of those who suffered a loss of redress are taken from the funds collected. However, not all risks can be insured farm. Several conditions can be insured agricultural risk are:

1. The insured events are unpredictable occurrence.
2. The probability of occurrence is relatively low.
3. The insured events not within the control of the insured farmers.
4. Events losses should stand on its own statistics, meaning that the insured object is not concentrated on a region or overlay the same area.

Many found that successful agricultural insurance program resulting from the application of the basic concepts correctly. Insurance can play an important role in the management of various aspects of agricultural risk, but insurance does not address all risks. The World Bank reported that agricultural insurance is an important component of risk management, but it cannot replace good management procedures, methods of producing advanced by investing in new technologies. If innovation and technology can be managed well, the agricultural insurance scheme can improve the lives of rural communities while increasing production and enhancing food security (World Bank, 2009).

Agricultural insurance classified as a type of insurance is complex. The risk of crop failure such as drought, flooding and pest attacks (Plant Pest Organisms) usually occur and overwrite the farmers at the same time in the growing season. If the attack was widespread, then the charges filed claims will weigh heavily on the financial capacity of insurance companies, which can even make the insurance company stopped operating. This fact also because insurance companies agriculture barely able to meet the demands of the claims from premiums received. In this connection, the need for reinsurance become indispensable for the survival of the agricultural insurance program.

Agricultural insurance has been implemented by many developed countries, especially the United States since the 1930s, followed by Europe and countries in the Asia-Pacific with Japan escorting the formation of agricultural insurance legislation in 1929. The agricultural insurance in India is the insurance of grain, edible oil seeds insurance, cotton insurance, potatoes insurance and sugar cane. This insurance provides compensation guarantee against the risk of fire including the effect of thunder / lightning, windstorm, hail, hurricanes, tidal, drought and pests and diseases. Insurance in Iran is an wheat insurance, cotton, seeds edible oil, meadow, grapes,

apple, orchards, citrus varieties, peas, crop, tea, honeybees, poultry and cattle. Insurance in guarantees against the risk of flooding, hail, hurricanes, and earthquakes.

Insurance in many developing countries such as Iran and India are supported by the government such as the Ministry of Economy and Finance, Ministry of Commerce, the Central Bank, the Agricultural Bank and insurance companies. Agricultural Bank appointed government fully responsible for the implementation of the insurance program. Government help provide subsidies and the subsidy amount changes from year to year according to the government's policies and plans in the agricultural sector.

The scope of agricultural insurance as it is known in many countries in terms of insured object commodities, agricultural insurance products covering a wide range of agricultural commodities on food crops, horticultural crops, livestock and plantation crops. Naming insurance products for staple commodities can be exemplified as follows (Bappenas, 2013):

1. Rice crop insurance
2. Corn crop insurance
3. High value crop insurance
4. Livestock / bloodstock insurance
5. Growing trees / standing trees insurance

From the method of calculation of the compensation (indemnity) which will be filed as a claim, agricultural insurance is divided into 4 types:

1. Agricultural insurance indemnity-based (indemnity-based insurance), where the value of compensation determined early usually valued at the cost of production.
2. Insurance index-based agricultural production (yield index insurance), where compensation is given if production is less than the amount of tonnage above a certain limit, up to the amount of tonnage under certain limits.
3. Agricultural insurance-based revenue yields (revenue insurance), where compensation is given if yield based on the amount of the guaranteed minimum tonnage, and based on the agreed prices.
4. Insurance weather index-based farm (weather index insurance).

5. The Implementation of Rice Farm Insurance in Indonesia

The current design of the rice crop insurance program is based on named perils indemnity based, wherein the Jasindo Insurance indemnifies the damage/ loss of rice crops experienced by the insured at an agreed cost of production value. The insurance cover flood, draught and named pest and disease subject to the the intensity of damage reached 75% as per criterion set by the insurer, and the acreage of such damage reached 75%. This arrangement is designed to induce farmers to adhere to good farming practices and to minimize loss pertinent to the rice planting practices among farmers. The program will also hopefully help farmers to obtain access to financial institution (i.e. microfinance and loan) by providing a safety net for their input cost, which by extension provide lenders a sense of security that farmer will be able to payback their debt. Therefore, the ultimate aim of this insurance program is not only to finance/ transfer the risk of crop failure, but also to improve and anticipate the risk in the first place. It is also aims to increase financial inclusion among rural population, promote good farming practice, induce farmer to try out new/ unfamiliar high yielding seeds, and overall increase the productivity of farmers and uplifting farmers welfare.

As at May 2016, a successful land covered by insurance are the rice farming area of 237,036.19 hectares (out of a target of 1 million hectares), or only reached 23.7% of the target. Total premiums earned amounted to Rp. 42,666,514,200,-, with the claim ratio of 47.09%. Distribution of the claims in all provinces in Indonesia as shown in table 1.

From table 1 above shows that the underwriting result is still quite good, it is reflected in the premium income of Rp. 42.67 billion and claims paid amounted to Rp. 17.35 billion. Provinces that have the highest loss ratio are : North Sumatra (389.72%), South Kalimantan (152.11%) and DI Aceh (136.98%).

Some of the obstacles faced in rice farming insurance program, among others:

1. The lack of competent human resources
2. The difficulty of predicting costs incurred at the time of dissemination/ data collection and marketing

3. Lack of resources during the data collection process rice farmers
4. Lack of insurance infrastructure
5. Target land farming insurance are very spacious (the whole provinces of Republic of Indonesia)
6. Lack of public awareness about insurance products
7. Some farmers feel no need to buy insurance program

NO	PROVINCE	INSURED AREA (Ha)	CLAIM (Ha)	CLAIM RATIO (%)	PREMIUM	CLAIM	LOSS RATIO (%)	DOMINANT CAUSE OF LOSS
1	Bali	6.094,72	117,75	1,93%	Rp 1.097.049.600	Rp 706.500.000	64,40%	Rat
2	Banten	15.358,48	345,15	2,25%	Rp 2.764.526.400	Rp 2.070.900.000	74,91%	Flood, Rat, Golden Snail & Blast
3	Aceh	3.093,16	127,11	4,11%	Rp 556.768.800	Rp 762.660.000	136,98%	Flood, Rat & Golden Snail
4	Central Java	42.777,81	200,21	0,47%	Rp 7.700.005.800	Rp 1.201.260.000	15,60%	Flood & Stem Borer
5	DIY	975,76	4,57	0,47%	Rp 175.636.800	Rp 27.420.000	15,61%	Flood
6	West Java	61.163,70	726,94	1,19%	Rp 11.009.466.000	Rp 4.361.640.000	39,62%	Flood
7	East Java	27.674,16	241,57	0,87%	Rp 4.981.348.800	Rp 1.449.420.000	29,10%	Flood & Rat
8	West Kalimantan	935,47	32,93	3,52%	Rp 168.384.600	Rp 197.580.000	117,34%	Blast & Golden Snail
9	South Kalimantan	3.192,92	145,70	4,56%	Rp 574.725.600	Rp 874.200.000	152,11%	Flood & Blast
10	Lampung	6.033,61	258,75	4,29%	Rp 1.086.049.800	Rp 1.552.500.000	142,95%	Flood, Stem Borer & Blast
11	NTB	5.159,56	90,86	1,76%	Rp 928.720.800	Rp 545.160.000	58,70%	Flood & Stem Borer
12	South Sulawesi	10.354,93	75,55	0,73%	Rp 1.863.887.400	Rp 453.300.000	24,32%	Flood
13	Central Sulawesi	20.251,55	92,77	0,46%	Rp 3.645.279.000	Rp 556.620.000	15,27%	Stem Borer
14	West Sumatera	22.260,27	167,81	0,75%	Rp 4.006.848.600	Rp 1.006.860.000	25,13%	Flood, Rat & Blast
15	South Sumatera	10.767,30	153,18	1,42%	Rp 1.938.114.000	Rp 919.080.000	47,42%	Flood, Rat & Golden Snail
16	North Sumatera	942,81	110,23	11,69%	Rp 169.705.800	Rp 661.380.000	389,72%	Flood, Rat & Golden Snail
TOTAL		237.036,21	2.891,08	1,22%	42.666.517.800	17.346.480.000	40,66%	

Table 1. Claim Distribution in All Provinces (As at May 2016)

6. Conclusion

In conclusion, the positive development of agriculture in Indonesia in term of rice farming insurance program during 2015 – 2016 is in a good progress. However, there is need for government to optimally allocate resources. Keep the socialization and public service ads funded by the government, in terms of rice farming insurance program, so it can be better known by the farming community and all Indonesia society as a whole. The rice farming insurance program also require cooperation with all of universities in local provinces, so it can get help from students. Especially for data collection process. Need to cooperate with a foreign countries for technology assistance using satellite imaging, for monitoring the affected area or pests, so the cost of the survey claims can be reduced.

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