

## 附件

一、議程表

二、出席人員名單

三、中華民國國情報告

Workshop on Agricultural Insurance Systems  
28 November–2 December 2016 Manila, Philippines

與會人員/單位	議程內容	課程時數	與會專家 (名字/單位/國家)
謝廉一/行政院農業委員會農糧署  鄭雅方/行政院農業委員會農業金融局	一、 專題演講： 1. 亞太地區農業保險之風險管理 Risk management in Agriculture in Asia and the Pacific region 2. 農業保險作為改善小農生產力及危險分散之角色 Role of agricultural insurance as a risk-mitigating and productivity improvement measure for smallholder farmers 3. 農業保險之前景、挑戰及機會 Agricultural insurance: Perspective, challenges, and opportunities 4. 推動農業保險之趨勢原則及新作法 Principles of trends in, and emerging practices on agricultural insurance delivery 5. 農業保險創新商品、模式及計劃 Innovative products, models, and schemes of agricultural insurance delivery 6. 科學及技術對提高農業保險需求之角色 Role of science and technology increasing demand for agricultural insurance 7. 政府及私部門支持農業保險之原因、政策、趨勢及成本 Rationale for, policies on, trends in, and cost of public and private-sector support for agricultural insurance 8. 政府及私部門對於農業保險之設計、推動及永續發展之支持措施 Type of public- and private-sector support for and strategies in agricultural insurance design, promotion, and sustainability 9. 農業保險計畫(方案)之成功模式、計畫及作法 Successful models and schemes and best practices in the management of agricultural insurance schemes/programs 二、 孟加拉、柬埔寨、斐濟、印度、印尼、伊朗、寮國、馬來西亞、蒙古、尼泊爾、菲律賓、臺灣、斯里蘭卡、泰國及越南等各國之國情報告。 三、 參訪 Philippine Crop Insurance Corporation (PCIC)及 CRUZIAN Multi-Purpose Cooperative 四、 分組討論 1. 就農民面臨風險、風險管理、因應機	38.5	與會學員 1. Shaikh Mehdee Mohammad/ Rural Development Academy, Bogra/ Bangladesh 2. Wasiful Hoq/ Sadharan Bima Corporation / Bangladesh 3. Orn Phalla/ Kingdom Fruits International Co., Ltd./ Cambodia 4. Akuila Ramotumotu Nacoke/ Ministry of Agriculture/ Fiji 5. Manjeet Singh Nain/ Division of Agricultural Extension, ICAR-Indian Agricultural Research Institute / India 6. Surya Swaroop/ Agriculture Insurance Company of India Ltd./ India 7. Christianto Lopusu/ Hasanuddin University / Indonesia 8. Maryam Ardestani/ Agricultural Planning, Economic and Rural Development Research Institute/ Islamic Republic of Iran 9. Aliaphone Manivanh/ Planning Division, Department of Agriculture, Ministry of Agriculture and Forestry / Lao PDR 10. Ting Ping Ping/ Pest Management Section, Plant Biosecurity Division/ Department of Agriculture Malaysia/ Malaysia 11. Davagsambuu Chintsetseg/ Department of Insurance Management, Ikh Zasag University / Mongolia 12. Vijaya Bahadur Shah/ NLG Insurance Company Limited/ Nepal 13. Belinda C. Serna/ Department of Agrarian Reform, Bureau of Agrarian Reform Beneficiaries Development/ Philippines 14. Catalina Talosig Austria/ OIC-Supervising Agrarian Reform Beneficiaries Department of Agrarian Reform/ Philippines 15. Enrique Canapit Paderes/ Department of Agrarian Reform/ Philippines 16. Lenie A Tenorio/ Department of Agrarian Reform/ Philippines 17. MA. Lilian Evangelista Aguilar/ Philippine Crop Insurance Corporation / Philippines 18. Manuel Juanite Cortina/ Philippine Crop Insurance Corporation/ Philippines 19. Melegoda Gamage Nadeeka Dilrukshie / Department of Cooperative Development / Sri Lanka 20. Yaddhige Asiri Poorna Viragitha Amarasinghe/ Land, Provincial Irrigation, Agriculture, Animal Production & Animal Health & Fisheries/ Sri Lanka 21. Khamdoug Chaisri/ Bank for Agriculture and Agricultural Cooperatives/ Thailand 22. Le Thi Thuy Van/ National Institute for Finance, Ministry of Finance of Vietnam/ Vietnam 專題演講講師 1. Peter Book / Allianz SE / Singapore 2. Mayank Dubey / Weather Risk Management Services Pvt. Ltd / India 3. Dr. Olena Sosenko / AgrolInsurance International /

	<p>制等議題進行討論。</p> <p>2. 就 PCIC 推動農業保險之成功經驗，討論如何運用於各國農業保險體制及各國無法複製其經驗之原因等議題進行討論。</p>		Switzerland
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**整體目標效益及未來應用建議：**

- 一、本次研討會，講座人員透過專題演講、各國辦理農業保險經驗交流及分組討論，就各國農業保險現況、農業保險對於農民風險管理之角色，及如何推動農業保險等，有一系列的討論，得到建議如下：
- (一) 為使農民可持續及有彈性應對各種經濟性之衝擊，應優先推動農業保險。
  - (二) CIRDP 及 APO 會員國間應持續分享農業保險的經驗、課題及趨勢。
  - (三) 為建立農業保險制度及開發相關保險商品，可藉由相似國家推動保險之經驗，設計培訓課程。
  - (四) 使用先進技術，推動開發適合的農業保險制度及商品。
  - (五) 開發農業保險資料庫平台和各用戶資料共享機制。
  - (六) 建立知識庫，提高農民購買農業保險意願。
  - (七) 強化農業保險公私合作夥伴關係(Public-private partnership, PPP)之責任及角色。
  - (八) 採用共同的標準及參數，作為衡量推動農業保險的成效。
- 二、將參考上開建議及各國之農業保險制度，建立適合我國國情之農業保險制度。

附件 1：議程表

附件 2：與會人員名單（學員、講師）

附件 1 議程表

Time	Activities/ Facilitator/ Presenter	Venue
<b>Day 1: Monday, 28 November 2016</b>		
Time	Activity	Responsible organization / Speaker
08:30-09:00	Registration	Local organizer
09:00-09:45	Opening session ➤ Welcome remarks  - Bureau of Agrarian Reform Beneficiaries Development (BARBD), Department of Agrarian Reform (DAR) - Department of Academy of Philippines (DAP) - Centre on Integrated Rural Development for Asia and the Pacific (CIRDAP) - Asian Productivity Organization (APO)  Self-Introduction of participants and resource persons  Group photograph	
09:45-10:15	Coffee break	
10:15-10:30	Program overview: Workshop objectives, structure, house rules, etc.	Dr. Shaikh Tanveer Hossain, APO
<b>Session 1: Importance of agriculture in Asia and the Pacific region and the role of agricultural insurance</b>		
10:30-11:15	Risk management in Agriculture in Asia and the Pacific region	Mr. Peter Book Head of Agriculture Asia Pacific, Allianz SE Reinsurance Branch Asia Pacific, Singapore
11:15-11:30	Discussion	
11:30-12:15	Role of agricultural insurance as a risk-mitigating and productivity improvement measure for smallholder farmers	Dr. Olena Sosenko, Senior Expert, AgroInsurance International, Switzerland
12:15-12:30	Discussion	
12:30-13:30	Lunch break	
13:30-14:15	Agricultural insurance: Perspective, challenges, and opportunities	Mr. Mayank Dubey, Specialist Underwriting Expert, Weather Risk Management Services Pvt. Ltd., India
14:15-14:30	Discussion	
<b>Session 2: Agricultural insurance provision in Asia and the Pacific region</b>		

14:30–15:15	Principles of, trends in, and emerging practices on agricultural insurance delivery	Dr. Olena Sosenko
15:15–15:30	Discussion	
15:30–15:45	Coffee break	
15:45- 16:30	Innovative products, models, and schemes of agricultural insurance delivery	Mr. Mayank Dubey
16:30-16:45	Discussion	
16:45–17:15	Recap (Summary and highlights)	
19:00- 21:00	Welcome dinner hosted by APO	Venue TBD
<b>Day 2: Tuesday, 29 November 2016</b>		
08:30–09:00	Recap and warm up	
09:00–09:45	Role of science and technology increasing demand for agricultural insurance	Mr. Mayank Dubey
09:45–10:00	Discussion	
10:00–10:15	Coffee break	
10:15–11:15	Country paper presentations (selected countries)	Participants
11:15–11:30	Discussion	
11:30–12:15	Country paper presentations (selected countries)	Participants
12:15–12:30	Discussion	
12:30–13:30	Lunch break	
13:30–14:15	Country paper presentations (selected countries)	Participants
14:15–14:30	Discussion	
<b>Session 3: Government and private-sector support for agricultural insurance in Asia and the Pacific region</b>		
14:30–15:15	Rationale for, policies on, trends in, and cost of public and private-sector support for agricultural insurance	Dr. Olena Sosenko
15:15–15:30	Discussion	
15:30–15:45	Coffee break	
15:45–16:30	Type of public- and private-sector support for and strategies in agricultural insurance design, promotion, and sustainability	Mr. Peter Book
16:30–16:45	Discussion	
16:45–17:15	Recap (Summary and highlights)	
<b>Day 3: Wednesday, 30 November 2016</b>		
08:30–08:45	Recap and warm up	
08:45–09:30	Successful models and schemes and best practices in the	Mr. Peter Book

	management of agricultural insurance schemes/programs	
09:30–09:45	Outline of Group breakout session	
09:45–10:30	Group breakout session 1 : Which unresolved farm risk management issues are known to participants in their countries? Do participants see some insurance products, models, and schemes existing among APO and CIRDAP member countries, which could be relevant and replicated in their countries? How specifically their governments should support the potential insurance schemes in order to ensure affordable, acceptable, accessible agricultural insurance solutions for low-income/smallholder farmers?	RPs/Participants
10:30–10:45	Coffee break	
10:45–12:30	Continue : Group break session 1	
12:30–13:30	Lunch break	
13:30–15:00	Continue : Group break session 1	
15:00–15:15	Coffee break	
15:15–16:15	Group Presentation : Breakout session 1	
16:15–16:45	Discussion and Recap of Day 3	
16:45–17:00	Briefing on site visit	
<b>Day 4: Thursday, 1 December 2016</b>		
<b>Session 4: Field visits</b>		
08:00–17:00	1. Field Visit to selected government and nongovernmental institutions engaging in agricultural insurance programs 2. Field Visit to successful smallholder farmers and organizational beneficiaries of agricultural insurance support	Local organizers Detail information: to be provided
<b>Day 5: Friday, 2 December 2016</b>		
<b>Session 5: Group breakout session, summing-up presentation, program evaluation, and closing ceremony</b>		
08:30–09:00	Recap and warm up	
09:00–10:30	Group breakout session 2: Which the most valuable ideas participants derived from the workshop and could forward to their governments in order to support agricultural insurance initiatives? Which specific steps participants could contribute personally into achieving/ operationalizing these mentioned ideas?	RPs/Participants
10:30–10:45	Coffee break	
10:45–11:30	Continue: Group breakout session	

11:30-12:15	Reporting of outputs of group breakout session 2	Participants
12:15-12:30	Discussion	
12:30-13:30	Lunch break	
13:30-14:00	Summing-up presentation: Synthesis of the overall	RPs
14:00-14:30	Program evaluation by participants and resource persons	
14:30-15:00	Formulation of action plans for follow-up by individual participants after the project completion	
15:30-16:30	<p>Closing session</p> <ul style="list-style-type: none"> <li>- Vote of thanks from participants</li> <li>- Messages from RPs</li> <li>- Address of CIRDAP Representative</li> <li>- Address from APO Representative</li> <li>- Address of DAR official</li> <li>- Address of DAP</li> <li>- Awarding of certificates</li> </ul>	Local organizers

**16-AG-15-GE-WSP-B Workshop on Agricultural Insurance Systems**

( 28 November–2 December 2016, Manila, Philippines )

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*Total number of Participants = 24*

*Overseas = 18*

*Locals = 6*

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(Alphabetical order)

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Country Paper  
**16-AG-15-GE-WSP-B**

# **Experience of Agricultural Insurance Systems in the Republic of China**

**Taiwan (R.O.C.)**

**28 Nov-2 Dec 2016**

**Manilla, Philippines**

# Experience of Agricultural Insurance Systems in the Republic of China

## **Taiwan (R.O.C.)**

Participants (in alphabet order)

Mr. Lien-Yi Hsieh  
Specialist  
Agricultural and Food Agency  
Council of Agriculture, Executive Yuan

Ms. Ya-Fang , Cheng  
Specialist  
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## Abstract

In the Republic of China (R.O.C, Taiwan), crops damage are caused by typhoons and torrential rainfall in summer and fall as well as the frost in winter. From 1991 to 2015, the total loss amount reached to NT\$ 123 billion and over 89% of the loss was caused by typhoons and torrential rainfall. Therefore, it's necessary to implement the agricultural insurance to eliminate the risk of damages caused by disasters and to enhance protection for farmers. Although the agricultural insurance law hasn't been made yet in Taiwan, to accumulate pilot experience, crop disaster insurance pilot program was first implemented in 2015. Fubon Insurance Company was in charge of insurance product development and selected grafted pears as its insured subject matter. In 2016, Fubon Insurance Company added pears to its coverage and Cathay Century insurance company also developed a disaster insurance pilot program for mangoes. Currently in Taiwan, farmers rely heavily on the government's natural disaster relief program, and it is hoped that, by improving the insurance mechanism and strengthening the promotion effort, the disaster relief would gradually be covered by insurance. In the future, we will take into account the successful experience of other countries, including the regulatory system and the content of their insurance plan, as well as our own result of piloting to establish and adjust the agricultural insurance system, making it conforms to the nature of Taiwan's agriculture, as well as its scale of operation.



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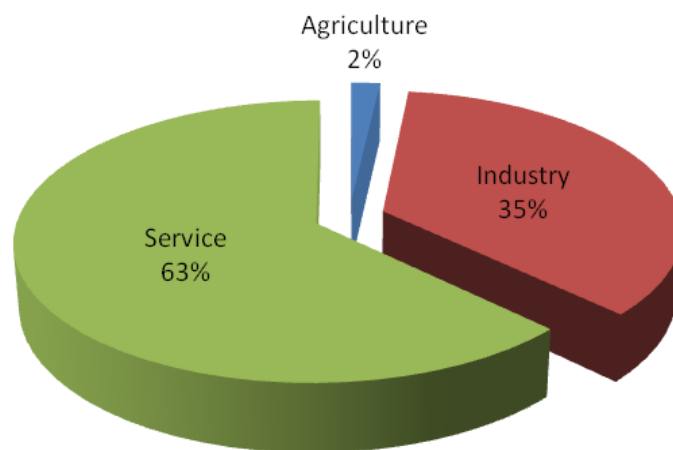
<b>A. Introduction .....</b>	<b>4</b>
<b>B. The prospects and problems of agricultural insurance .....</b>	<b>6</b>
<b>C. Agricultural Insurance Pilot program .....</b>	<b>7</b>
<b>D. Challenges of Agricultural Insurance in Taiwan .....</b>	<b>10</b>
<b>E. Conclusion .....</b>	<b>12</b>

## A. Introduction

The Republic of China was founded in 1911 and this year is its 105th anniversary. The territory is 36,194 square kilometers with only 7,966 square kilometers available for agricultural cultivation. At Taiwan's initial stage of economic development, it focused on agriculture. During the past 30 years or so, Taiwan has turned from agriculture-based economy to service-based one.

With the change of economic structure, the overall contribution of agriculture in terms of GDP is decreasing. During the period of 2015, agricultural productions amounted to US \$16 billion (NTD 502 billion) (Crops, livestock, fishery and forestry respectively accounted for 48.87%, 32.69%, 18.39%, and 0.05%); Total Gross Domestic Product (GDP) amounted to US \$523 billion (NTD 16,688 billion), and agricultural of GDP amounted to US \$9 billion (NTD 296 billion), so agricultural contribution to GDP was 1.7%. However, agriculture has been the country's foundation for long-term development.

Chart 1: 2015 GDP by Kind of Activity



Source: Gross Domestic Product by Kind of Activity, Council of Agriculture , Executive Yuan

The island of Taiwan lies between the Tropical Zone and the Subtropical Zone. Because of its geographical location, the climate is complex and ever changing. In Taiwan, crops damage are caused by typhoons and torrential rainfall in summer and fall as well as the frost in winter. Climate change is increasing the frequency and intensity of extreme weather events. These events usually have great consequences and cause serious damages to our properties and environment. From 1991 to 2015, the total loss amount reached to NT\$ 123 billion and over 89% of the loss was caused by typhoons and torrential rainfall.

Table 1: 1991-2015 Amount of Products Loss from Natural Disasters and the Percentage

Unit: NTD billion

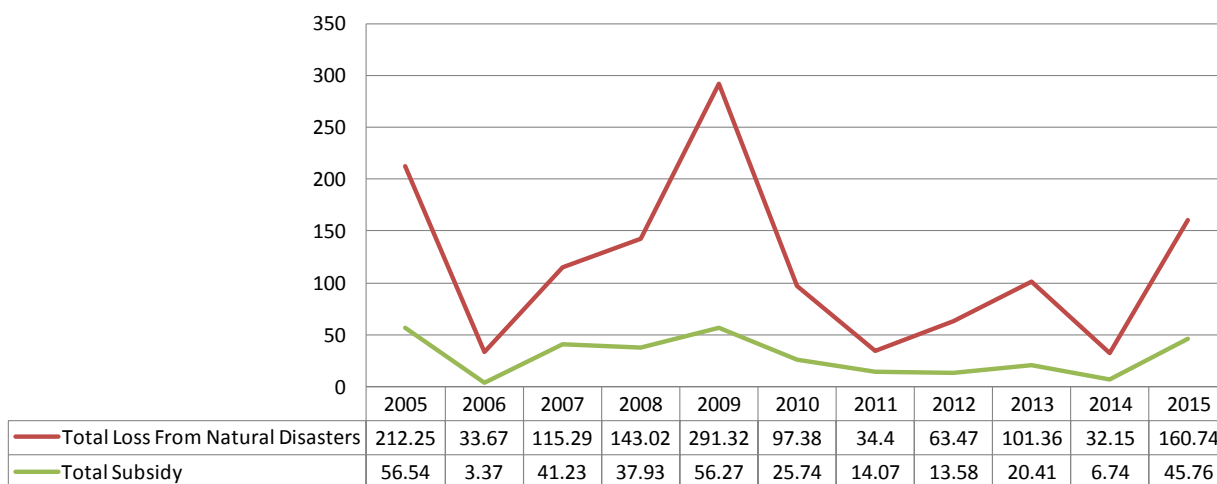
Category of Disaster	Amount of Products Loss	Percentage
Typhoon	94.14	76.52%
Flood/Torrential Rainfall	15.37	12.49%
Earthquake	2.06	1.67%
Frost Damage	7.09	5.76%
Hailstone	3.58	2.91%
Drought	0.79	0.65%
Total	123.03	100%

Source: Estimated Production Loss of Major Agricultural Disasters, Council of Agriculture , Executive Yuan

Natural disasters did a lot of damage to the agriculture production and affected farmers' income; hence, the government has compensated for agriculture production damages and losses by redressing subsidy since 1990. From 1990 to 2015, the total subsidy is over NT\$ 41.5 billion. According to the official data, it shows that the total loss amount reached to NT\$ 123 billion, but only 34% of loss was covered by subsidy. It is actually not enough to offset farmers' damages. Therefore, it's necessary to implement the agricultural insurance to eliminate the risk of damages caused by disasters and to enhance protection for farmers.

Chart 2: 2005-2015 Total Loss from Natural Disasters and Total Subsidy

Unit: NTD 100 million



Source: [http://lci.ly.gov.tw/LyLCEW/lcivComm.action#pageName\\_searchResult=1](http://lci.ly.gov.tw/LyLCEW/lcivComm.action#pageName_searchResult=1)

## **B. The prospects and problems of agricultural insurance**

Agricultural insurance plays a critical role in the process of agricultural development. The government is planning to implement the agricultural insurance so that the risk of damages caused by natural disasters could be managed and the life quality of the farmers and fishermen could be improved. Hopefully, it could facilitate the economic development in the rural and fishing neighborhood. In the process of implementing the agricultural insurance, some problems have arisen, stated as below:

- (I) The crops in Taiwan are various and their production is small-scale. In addition, because of Taiwan's geographical location and climate, natural disasters happen frequently and usually cause huge damage to farmland and the rural environment. With all the factors involved, the risk of agricultural disasters is huge. The premium rate of the insurance calculated based on historical data of the disaster frequency and loss severity is high. The higher premium rate places heavier burden on farmers and fishermen.
- (II) The lack of sufficient statistic data makes it hard to determine the optimal premium rate and the amount of insurance.
- (III) As the subject matter insured of agriculture insurance is agricultural products, the judgment of insurance accident is hard and controversial.
- (IV) The cost of implementing agricultural insurance is high due to the lack of professionals specialized in agricultural damage assessment.
- (V) Farmers' and fishermen's knowledge about and understanding of agricultural insurance are insufficient, so insurance coverage ratio remains low.

For the smooth operation of the agricultural insurance and solving the above-mentioned problems, the government should provide historical statistic data on the cost of production, losses from natural disasters, and so on so that it can assist insurers to design insurance products, handle insurance underwriting, and assess damages. The government should also collect opinions from farmers and fishermen, disseminate agricultural insurance products, and develop human resources for damage assessment, etc. Furthermore, to diversify catastrophe risks, the government should establish a risk assumption mechanism and cooperate with commercial insurance companies for implementing agricultural insurance.

### C. Agricultural Insurance Pilot program

The agricultural insurance law hasn't been made yet in Taiwan. In order to accumulate pilot experience, crop disaster insurance pilot program was first implemented in 2015. Fubon Insurance Company was in charge of insurance product development and used grafted pears as the subject matter insured.

**Pear natural disaster insurance:** In 2016, Fubon Insurance Company added pears to the subject matter insured, stated as below:

- (I) The Subject Matter Insured: pears (include grafted pears)
- (II) The Insured: the farmer who plants pears
- (III) The Insured Perils: typhoon, torrential rainfall and frost damage
- (IV) The Insurance Period: from top-working to harvest
- (V) There are two types of insurance policies: first loss insurance policies and policies linked natural disaster relief.

#### 1. First Loss Insurance Policies:

- (1) Master Policy: If typhoons or torrential rainfall occur during the policy period and thereby pears insured are damaged, insurance company will pay insurance benefits.
- (2) Additional Pear Scions Frost Damage Insurance: If the degree of damage caused by frost is more than or equal to 20 percent and the insured receives government subsidies according to Implementation Rules of Agricultural Natural Disaster Relief, insurance company will pay insurance benefits.

#### 2. Policies Linked Natural Disaster Relief:

- (1) If pears insured are damaged by typhoons or torrential rainfall, or pear scions insured are damaged by frost during the policy period.
- (2) The degree of damage is more than or equal to 20 percent.
- (3) The insured receives government subsidies according to Implementation Rules of Agricultural Natural Disaster Relief.

Insurance company will pay insurance benefits if the above conditions are all met.

- (VI) Premium Rate and The Amount of Insurance:

Table 2: Premium Rate and The Amount of Insurance

Unit: NTD

Program			Premium Rate (Unit: NTD per ha)	The Amount of Insurance (Typhoons or Torrential Rainfall)	The Amount of Insurance (Frost Damage)
First Loss Insurance Policies	Grafted Pears	1	45,400	350,000	-
		2	57,938	350,000	30,000
		3	70,477	350,000	60,000
	Pears	4	38,914	300,000	-
Policies Linked Natural Disaster Relief	Grafted Pears	1	12,538	-	30,000
		2	25,077	-	60,000
		3	15,462	60,000	-
		4	23,192	90,000	-
		5	28,000	60,000	30,000
		6	35,730	90,000	30,000
		7	40,539	60,000	60,000
		8	48,269	90,000	60,000
	Pears	9	15,462	60,000	-
		1 0	23,192	90,000	-

Source: [https://www.fubon.com/insurance/b2c/content/farm\\_insurance/index1.html](https://www.fubon.com/insurance/b2c/content/farm_insurance/index1.html)

(VII) Government Support: The central government shall pay one thirds of the premium. In addition, the local government shall pay one thirds of the premium depending on its financial condition.

**Mango natural disaster insurance:** Cathay century insurance company also developed the agricultural insurance product and used mangoes as the subject matter insured in 2016, stated as below:

- (I) The Subject Matter Insured: mangoes
- (II) The Insured: the farmer who plants mangoes
- (III) The Insured Perils: typhoon, torrential rainfall and frost damage
- (IV) The Insurance Period: from flowering to harvest
- (V) Policies Linked Natural Disaster Relief: If typhoons, torrential rainfall or frost occur during the policy period and thereby mangoes insured are damaged, insurance company will pay insurance benefits.
- (VI) Premium Rate and The Amount of Insurance:

Table 3: Premium Rate and The Amount of Insurance

Unit: NTD

Program	Premium Rate (Unit: NTD per ha)	The Amount of Insurance
1	14,978	30,000
2	29,955	60,000
3	44,933	90,000

Source:

<http://www.chunan.gov.tw/chunan/13-4-1.php?menuID=546&forewordID=243663&forewordTypeID=0&secureChk=568219d89e2a4b634e0da46f9b584d92>

**In the future to promote crop and insurance projects:** Currently, private insurance companies provide all the pilot insurance policies for agricultural crops; in the future, we will take into account the success experience of foreign countries, including how their laws and regulations, insurance policies, etc. were formulated, as well as the nature of our domestic agriculture, operation scales, and the pilot results, And the agricultural insurance will continue to expand its coverage to more crops. Meanwhile, the government also implements income insurance on farmers who cultivate sugar-apple. In order to stabilize summer vegetable production from the damage by typhoons and torrential rainfall, the government encourages farmers to set up greenhouse facilities and promote disaster insurance for these facilities to reduce the risks for farmers.

## **D. Challenges of Agricultural Insurance in Taiwan**

### **(I) Insured crop types, insurance rates and the willingness to purchase insurance**

The insurance industry has a complete insurance framework and the government has provided agricultural technology and related supporting measures, so the ground for development and implementation of agricultural insurance policies are already in place. But due to the high frequency and concentration of agricultural disasters, the operation of such insurance policy becomes increasingly difficult. For the sustainable development of agricultural insurance and to encourage the insurance industry to engage in agro-insurance business, most governments, such as the ones of United States and Canada, do provide business tax and other tax deduction for companies willing to provide this kind of policies. Also because agro-insurance is professional area, the government should provide all necessary assistance to the development of agricultural insurance products.

Since the subject matter agricultural insurances cover is relatively risky, the premium rate is higher than the general commercial product insurance. To reduce the burden on farmers and improve their willingness to adopt insurance, the government would, as most governments do, subsidy farmers' insurance payment.

Taiwan only pilot natural disaster insurance on grafted pear; however its current adoption rate is only 1%, which poses a difficulty to insurer, since the number is not great enough to effectively spread the risk. According to this experience, as the agricultural insurance has the characteristics of high risk and higher premium than the general commercial insurance, the farmers' willingness to participate was strongly affected, and therefore the government would have to subsidize the farmer insurance premium. In addition, farmers have long been relying on the government's natural disaster relief mechanism, so they have yet built a sense of risk management. Besides the government's own promotion effort, farmers' associations also have roles to play. This can accomplish by providing them with promotion bonuses or allowing them to collect administrative fees. For those who success in promotion, more incentivizing rewards are warranted. In sum, agricultural insurance and relief measures should be able to work jointly, or otherwise the natural disaster relief mechanism might be adjusted to incentivize farmers' willingness to participate.

### **(II) Accumulated loss experience and an complete insurance database**

The subject matter of agricultural insurance is living things or property attributable to agricultural, forestry, fishery, and animal husbandry productions. Due to their natures, their values are constantly changing along with the growth conditions. It is difficult and requires great deal of agricultural knowledge to clearly identify the coverage scope and payout amount after each loss, much more difficult than the general property insurance. Regarding this, the government can assist by establishing an agricultural insurance assessment system and training professionals in this field. With the analysis on historical data, the insurance department may estimate the potential losses with the law of large numbers to delineate the coverage scope and calculate the



premium rates. In order to obtain the relevant statistics, the insurer shall disclose all the relevant insurance details, claims, and disputes cases to the government to build a database for achieving better actuarial calculation for product design and set reasonable insurance premiums and payouts.

## **E. Conclusion**

Taiwan farmers' understanding of insurance is yet sufficient to widely adopt agricultural insurance. The promotion on agricultural insurance is an area where the government should cooperate with the insurance company.

Taiwan's agricultural insurance does yet have a dedicated governing law. In the future, the successful experience of other countries, including the regulatory system and the content of the insurance plan will be taken into account to adjust the agricultural insurance system according to the nature of our agriculture, scale of operations and the findings from piloting the insurances.