Impact Evaluation of the Agricultural Insurance Program of the Philippine Crop Insurance Corporation on Agricultural Producers in Region IVA - CALABARZON

PROJECT TEAM

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PRESENTATION OUTLINE

- INTRODUCTION
- METHODS
- RESULTS
- INSIGHTS AND RECOMMENDATIONS

INTRODUCTION

* Increased occurrence of extreme climate events in the Philippines

* Frequency and intensity of these has taken its toll on the small farmers

* Indebtedness to middle men and the financial loss due to climate events only pushed the farmers deeper into the debt hole

WHY THE DEBT HOLE?

INTRODUCTION

* Other problems beset our farmers like pests and diseases

* In 2013, the PCIC and PCA signed a MOU for the insurance coverage of coconut farmers against crop losses

* PCIC Charter (RA 8175) specifies the provision of government funds for the farmers to better manage and face risks inherent in agriculture

INTRODUCTION

* This study was conducted to evaluate the impact of the Philippine crop insurance program implemented by the PCIC on the coconut production system

* Specifically, it aims to:

    1. Provide an assessment of the implementation procedure of the crop insurance program implemented by the PCIC;

    2. Gather perceptions and feedback of farmer cooperative leaders and farmers on the crop insurance program; and

    3. Measure the farmers' willingness to pay for crop insurance.

METHODOLOGY

* The survey research design was used in the conduct of the evaluation

* 500 coconut farmers were interviewed using a designed survey instrument

* The intended conduct of the interview was CAPI (computer aided personal interview) using tablets

SAMPLING DESIGN

* Using the verified listings of the PCIC and the Registry of Coconut Farmers of the Philippine Coconut Authority as sampling frame

* The farmers listed were stratified according to treatment group and farm size

* The target sample size of 250 paired samples of insured and non-insured farmers were allocated proportionately to these strata

SAMPLE ALLOCATION:

Table 1. Distribution of sampled coconut farmers by group and farm size

Farm Size	With Insurance-With Claim	With Insurance-Without Claim	Without Insurance
Less than 0.5 ha	8	34	42
≥ 0.5 to 1 ha	21	29	50
Greater than 1 ha	96	62	158
Total	125	125	250

FIELD OPERATIONS:

- CAPI was not used in most areas due to some difficulties encountered
- To ensure 100% response rate some paired samples were replaced due to the following reasons:
  1. Farmer did not actually own coconut farms.
  2. Farmer was already dead.
  3. Farmer has changed address.
  4. Farmer refused to be interviewed.
  5. Inaccessibility of farmer's household location

SURVEY COVERAGE ACROSS CALABARZON

83% of the paired farmers came from Quezon Province
2% came from the province of Laguna
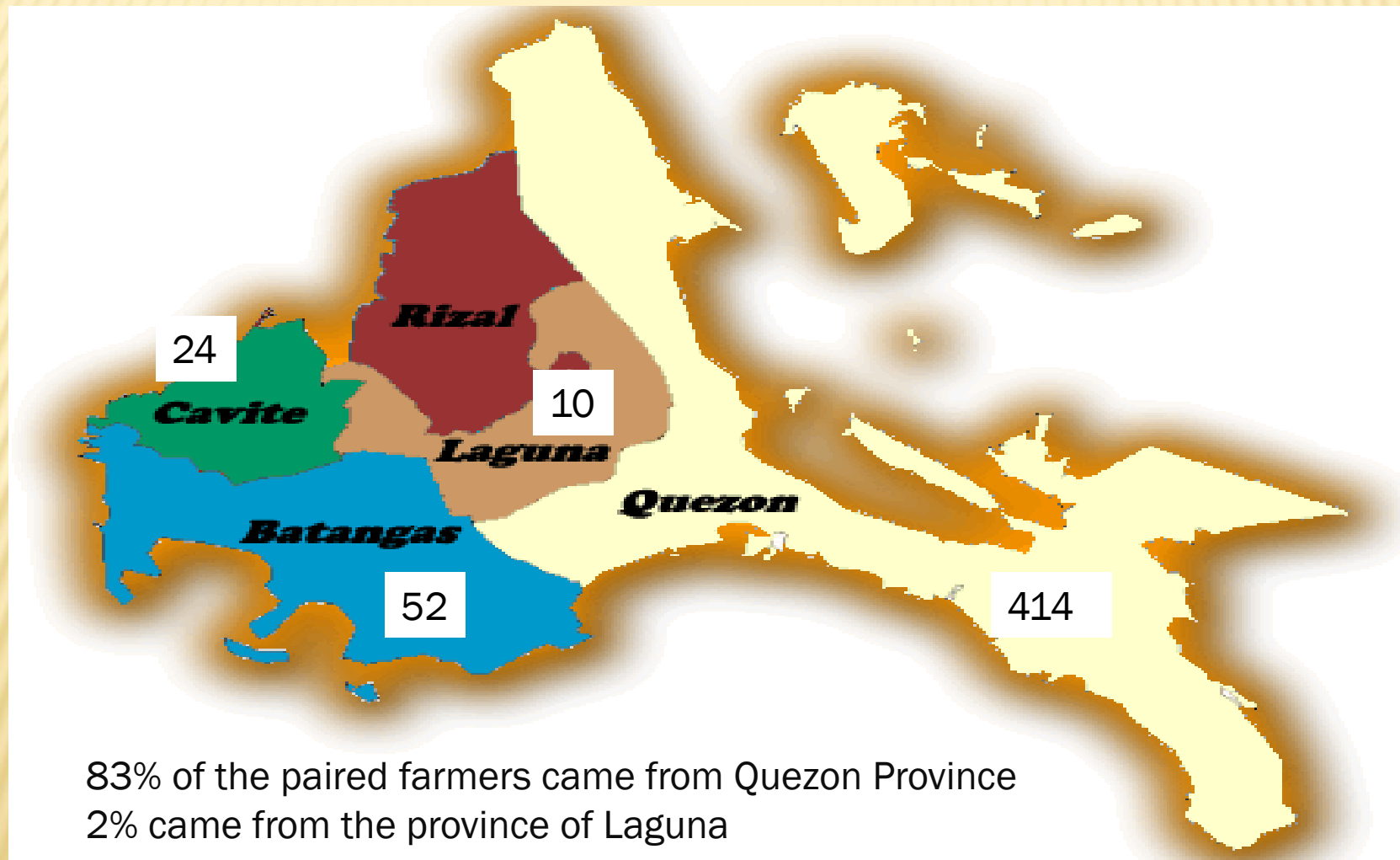
DATA ANALYSIS

* Descriptive statistics
* Inferential statistics

    - comparative tests

    - tests of association

    - logistic regression

RESULTS

Table 2. Mean age of farmer respondents across groups

TREATMENT GROUPS	FARM SIZE (hectare)			MEAN
	≤ 0.5	>0.5 to 1	≥1	
Insured , with claims	49	46	49	49
Insured, without claims	55	51	52	52
Non-insured	55	45	51	50

RESULTS

Table 3. Mean number of years of farming across groups

TREATMENT GROUPS	FARM SIZE (hectare)			Average
	≤ 0.5	> 0.5 to 1	≥1	
Insured , with claims	26.62	22.43	27.81	26.79
Insured, without claims	28.88	24.21	21.21	23.99
Non-insured	26.74	20.67	24.19	23.92

RESULTS

Table 4. Distribution of farmer respondents by sex and treatment group

GENDER	FARM SIZE (hectare)		
	≤ 0.5	> 0.5 to 1	≥1
Insured , with Claims			
Male	5 (1%)	14 (2.8%)	84 (16.8%)
Female	3 (0.6%)	7 (1.4%)	12 (2.4%)
Insured, Without Claims			
Male	25 (5%)	22 (4.4%)	53 (10.6%)
Female	9 (1.8%)	7 (1.4%)	9 (1.8%)
Without Insurance			
Male	29 (5.8%)	41 (8.2%)	116 (23.2%)
Female	13 (2.6%)	9 (1.8%)	42 (8.4%)

PIDS

RESULTS

×   Although association between civil status and treatment group was obtained, its magnitude was too small to be of statistical significance. It was revealed that for insured farmers, it is 1.44 times more likely that they are married.
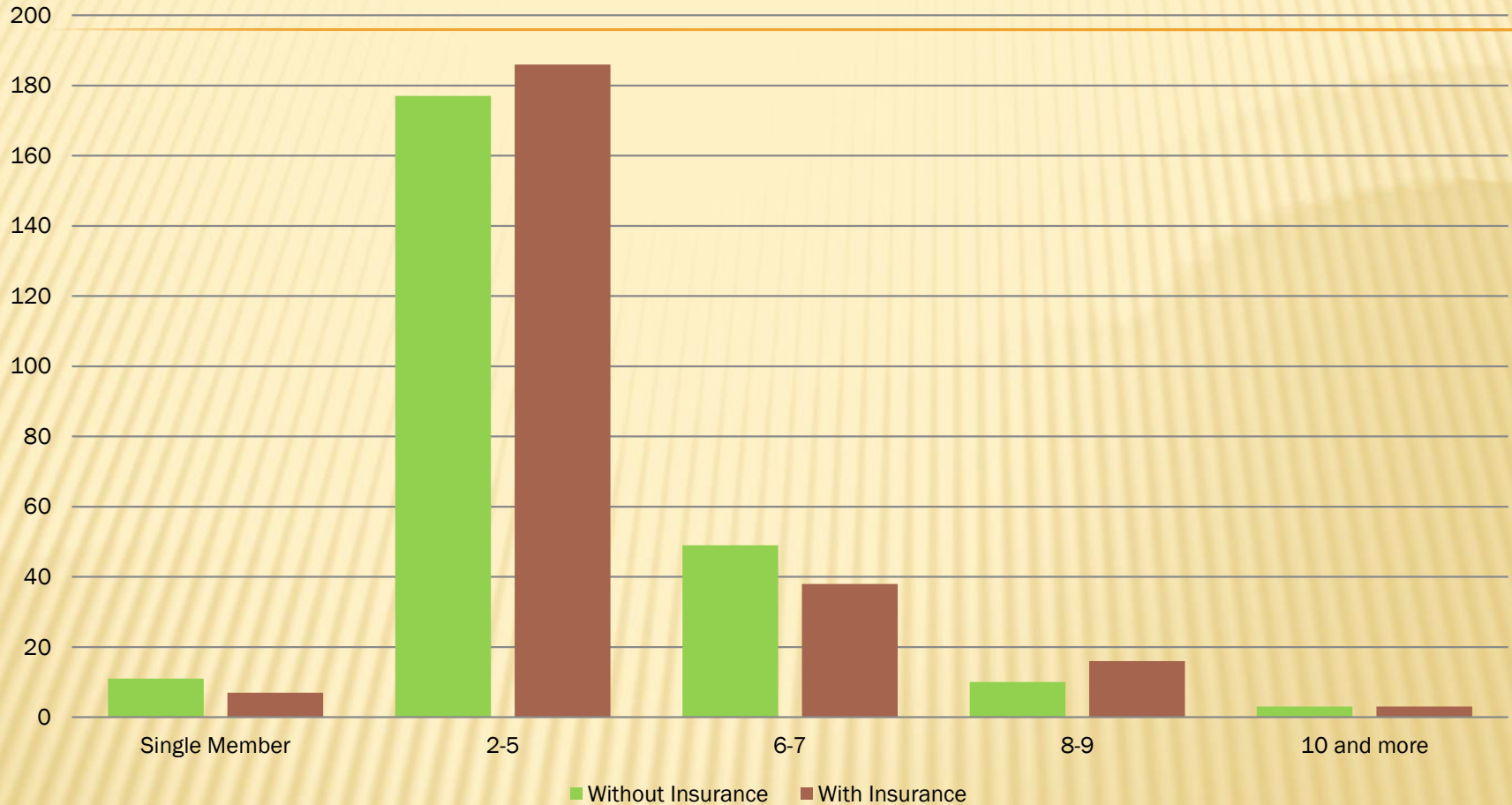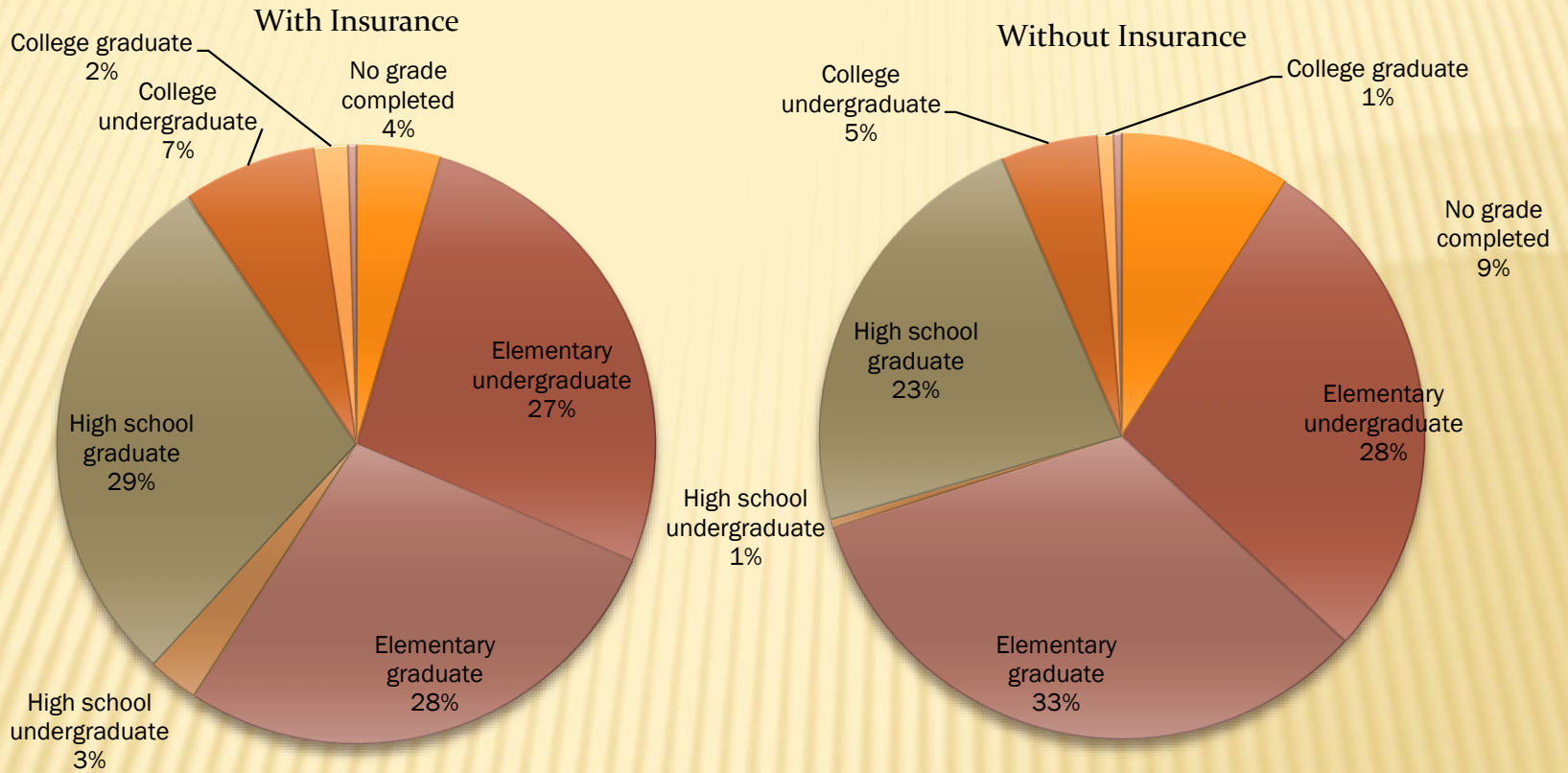
RESULTS

Figure 1. Distribution of farmers by household size and grouping

RESULTS

Table 5. Reported mean household sizes by treatment groups (2014-2015).

Treatment Group	FARM SIZE (hectare)		
	≤ 0.5	>0.5 to 1	>1
2014			
Insured with Claims	3.75	4.83	3.96
Insured without Claims	4.91	4.13	4.33
Not Insured	4.54	4.48	4.30
2015			
Insured with Claims	3.75	4.83	3.88
Insured without Claims	4.91	4.33	4.04
Not Insured	4.50	4.61	4.18

With Insurance

- College graduate 2%
- College undergraduate 7%
- No grade completed 4%
- Elementary undergraduate 27%
- Elementary graduate 28%
- High school undergraduate 3%
- High school graduate 29%

Without Insurance

- College undergraduate 5%
- College graduate 1%
- No grade completed 9%
- Elementary undergraduate 28%
- High school undergraduate 1%
- Elementary graduate 33%
- High school graduate 23%

Figure 2. Distribution of farmers by educational attainment and having insurance

RESULTS

* Farming was the most commonly reported primary and secondary occupation across treatment groups

* Only 15% of the farmers joined farmer organizations

* Farmers who are insured are 2.47 times more likely to be members of farmer organization than those who are not insured. Between farmers with claims and those without, those with claims are 1.2 times more likely to be members of farmer organizations.

RESULTS

Table 6. Dependency percentages by treatment groups (2014-2015).

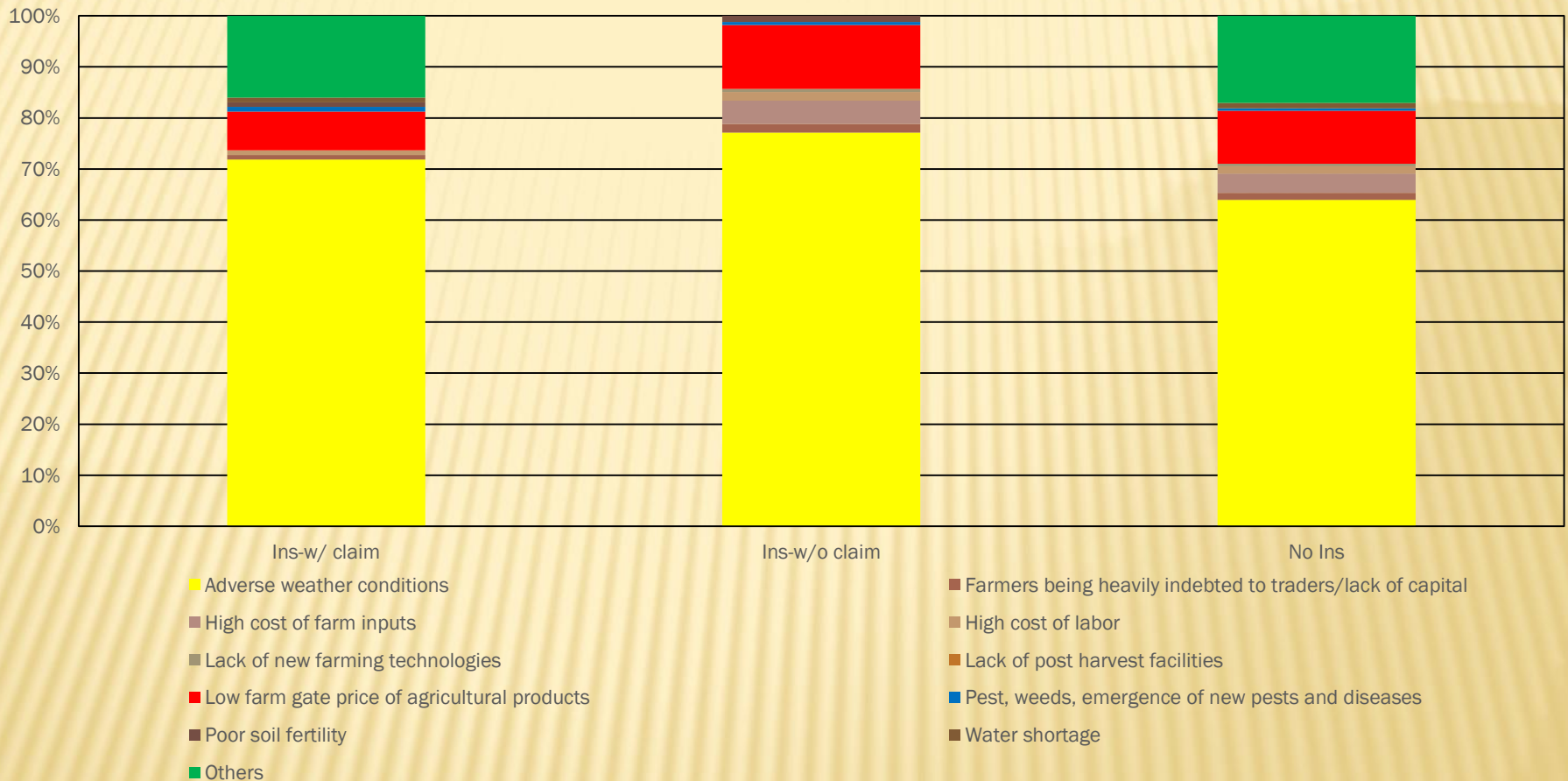| Treatment Groups	Farm Size (in ha)			Overall
	≤ 0.5	>0.5 to 1	> 1	
2014				
Insured with Claims	23.65	32.56	23.27	24.91
Insured without Claims	10.02	25.07	22.40	19.63
Not Insured	15.32	29.35	27.06	25.58
2015				
Insured with Claims	25.21	33.09	25.39	26.71
Insured without Claims	10.02	32.50	23.76	22.05
Not Insured	18.09	29.90	27.18	26.23

RESULTS

Figure 3. Distribution of farmers by problems encountered and group
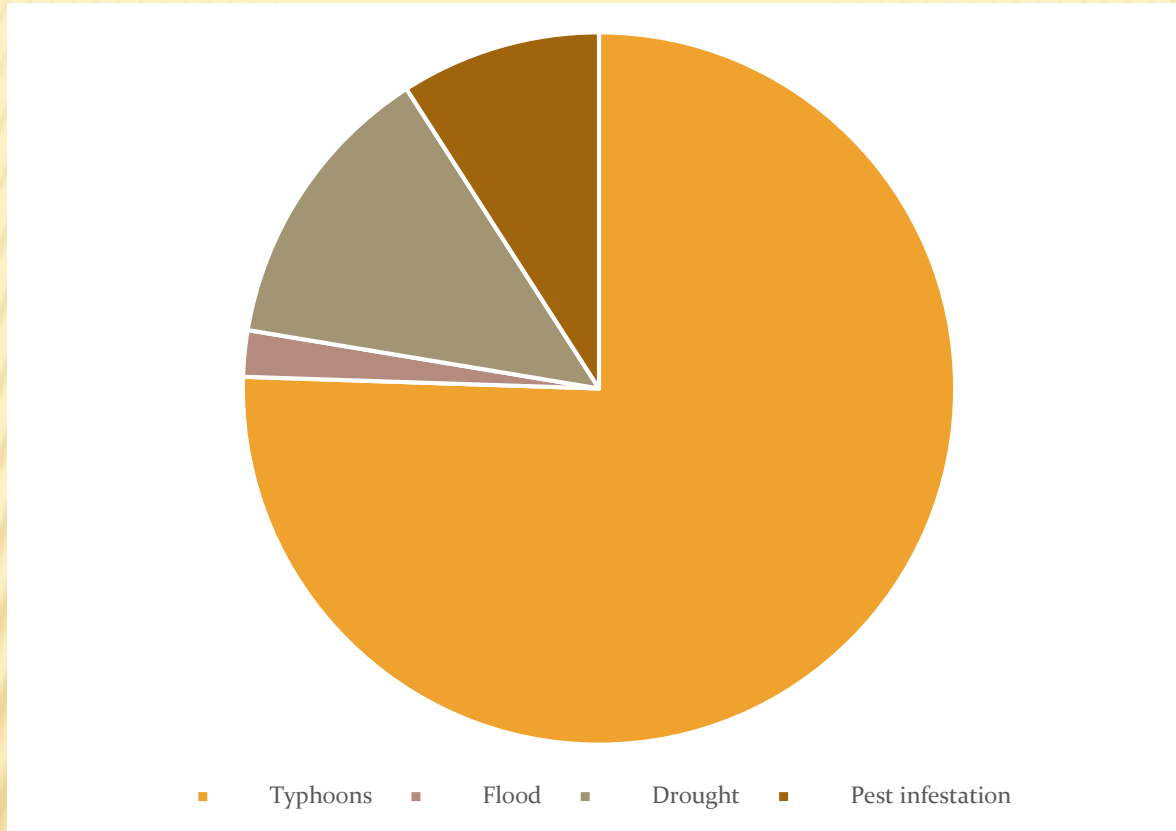
RESULTS

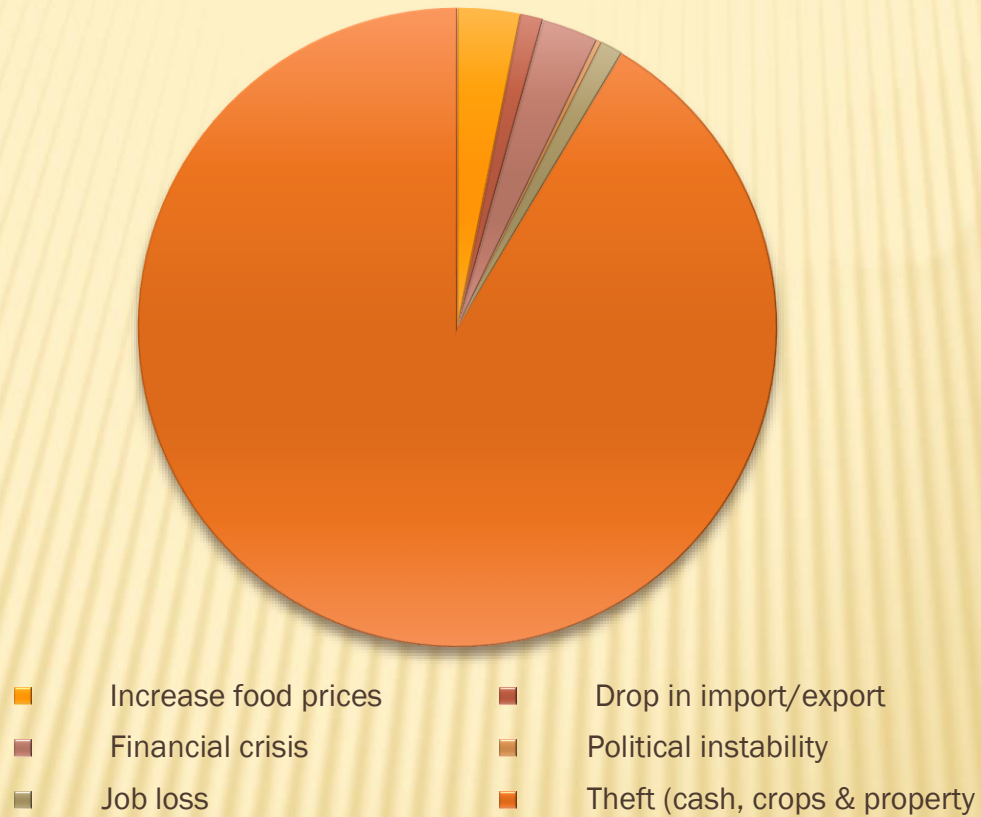Figure 4. Distribution of farmers by type of natural disaster experienced

RESULTS

	Increase food prices		Drop in import/export
	Financial crisis		Political instability
	Job loss		Theft (cash, crops & property

Figure 5. Distribution of farmers by type of man-made disaster experienced

RESULTS

- About 95% of insured farmers did not pay any premium. These were farmers who availed of the free insurance provided by the government.

- Most of the farmers were not aware that they were actually insured.

- Majority (78%) of the farmers availed of the free government insurance program implemented by the Department of Agriculture

- 18% of the farmers believed that it was the local government unit who provided the free insurance.

RESULTS

Top reasons for non-availment of insurance were:

1) lack of capacity to pay the premium(70%)

2) lack of knowledge on the procedure for availing of insurance(58%); and

3) unaware that crop insurance exists (56%)

RESULTS

* From among those who availed of insurance, reasons for nonregular availment were:

1) Not reaching the deadline for filing (100%)

2) Not having enough money to pay the premium (49%); and

3) Thinking that insurance is not helpful to his farming activities (44%)

RESULTS

Table 7. Summary statistics for the use of indemnity claims

Usage	Mean	Median	Std Dev	Min	Max
Used to pay farm production inputs	1639.29	1000	1286.05	500	4700
Used to pay existing loan so that I could renew my loan	750	750	353.55	500	1000
Used to buy food for my family	1623.08	1000	1237.71	500	5000
Used to pay for my children's educational expenses	550	500	173.21	400	850
Used to pay for my family's medical bills	1150	1150	1202.08	300	2000

RESULTS

- Logistic regression was used to identify farm and household characteristics associated with the probability that the farmer will be insured

- Only the involvement in farmers' organization gave significant association with the probability that the farmer will be insured (*p-value =.0006 and OR=2.46*) .

- farmers involved with farmer organizations are 2.46 times more likely to be insured than those who are not members of farmers' organization.

INSIGHTS AND RECOMMENDATIONS

- Increase visibility of PCIC by opening more offices spread out all over CALABARZON

- Sustained efforts to inform, educate and communicate the farmers on the advantages and benefits of insurance programs

- As was gathered, the farmers are not willing to pay any amount of premium. This poses a challenge for the insurance provider to come up with more attractive packages.

INSIGHTS AND RECOMMENDATIONS

- Insurance products that incorporate modern technology like weather based indices can be more attractive especially to avoid the problem of crop damage assessment.

- Multiperil insurance packages may also be introduced to cover damage caused by biotic and abiotic stresses.

Thank you!!!