



# THE EFFECTS OF CLIMATE CHANGE ON RICE YIELD OF PAMPANGA

By

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Presented by

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# Climate Change



## Pampanga



# METHODOLOGY

## DATA GATHERING

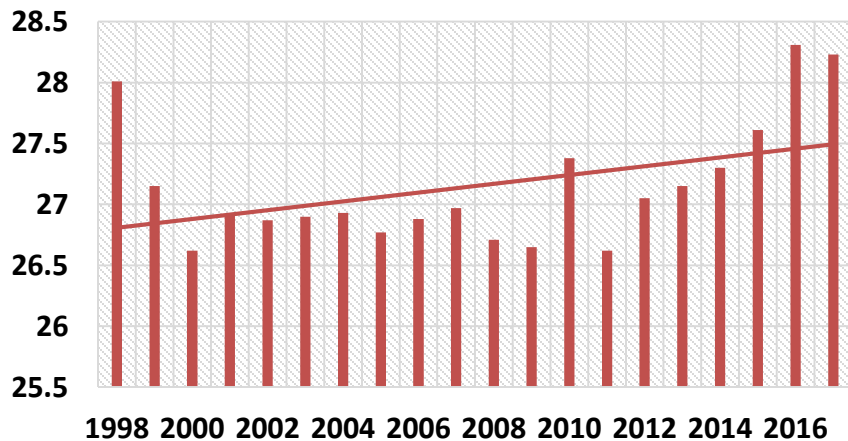
- Philippine Statistics Authority (PSA)
- Department of Agriculture Region 3, San Fernando, Pampanga
- (PAGASA), Clark, Pampanga.

## STATISTICAL TOOLS

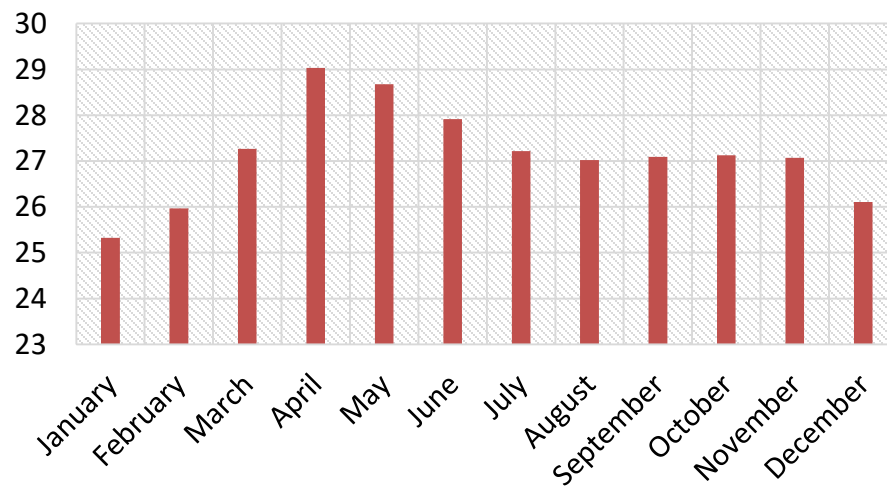
- Bar and Trend Line
- Pearson's Correlation

# Temperature in Pampanga

## Average Annual Temperature of Pampanga

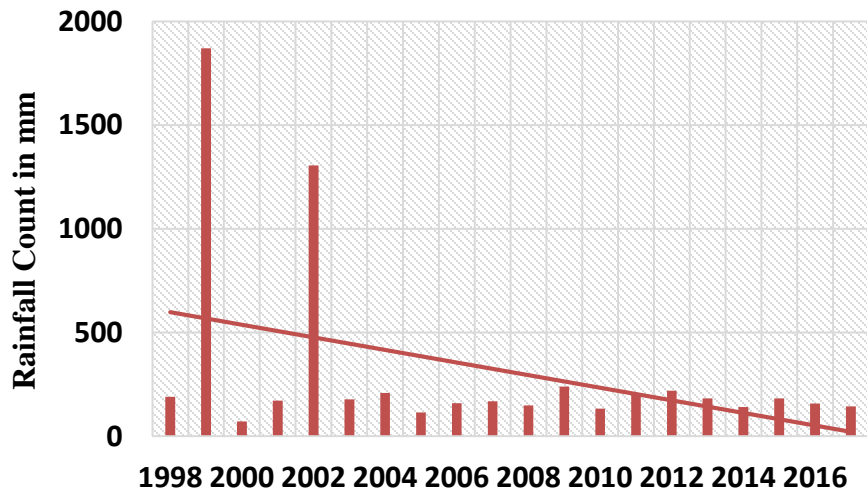


## Monthly Temperature

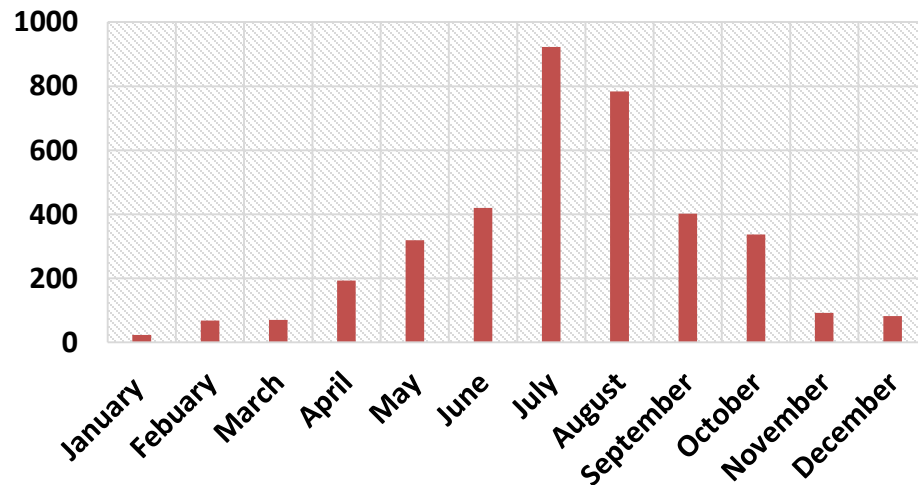


# Rainfall in Pampanga

## Annual Rainfall of Pampanga

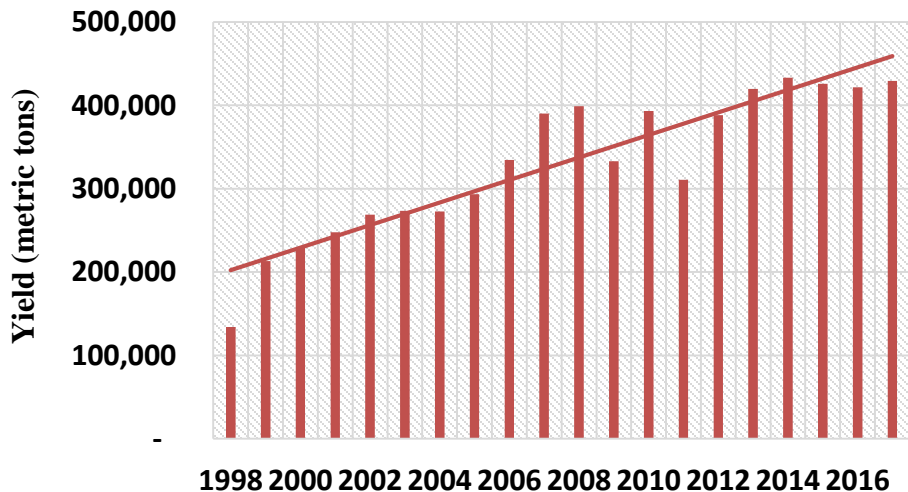


## Monthly Rainfall

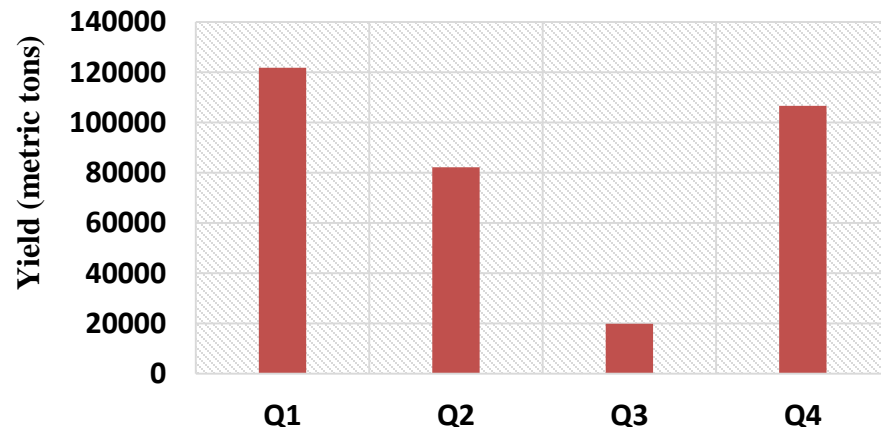


# Rice Yield of Pampanga

## Rice Yield of Pampanga



## Rice Yield of Pampanga per Quarter



**Quarter 1** – January, February, March

**Quarter 2** – April, May, June

**Quarter 3** – July, August, September

**Quarter 4** – October, November, December

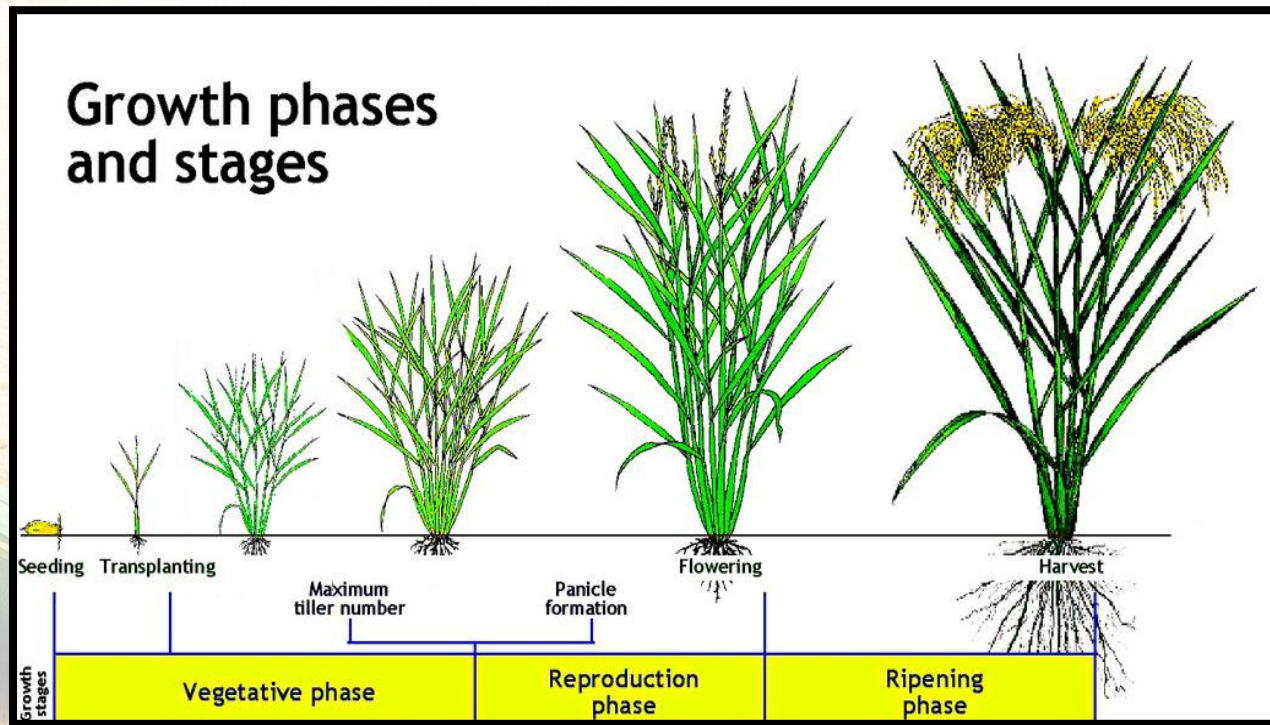
# Effects of Temperature and Rainfall on Rice Yield

Variables	Correlation	P-value
Temperature vs Rice Yield	-0.083	.463
Rainfall vs Rice Yield	-0.382	.000

**Legend:** 0.00 to  $\pm 0.20$  - slight correlation       $\pm 0.21$  to  $\pm 0.40$  - low correlation  
 $\pm 0.41$  to  $\pm 0.60$  - moderate correlation       $\pm 0.61$  to  $\pm 0.80$  - high correlation  
 $\pm 0.81$  to  $\pm 1.00$  - very high correlation

**Level of Significance:**  $\leq 0.05$

# Water Requirement of Rice





# Current and Proposed Cropping Calendar of Pampanga



	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
1 S T C R O P P I N G					Planting (Current)								
					Planting (Proposed)								
							Harvesting (Current)						
							Harvesting (Proposed)						
2 N D C R O P P I N G	Planting (Current)										Planting (Current)		
	Planting (Proposed)											Planting (Proposed)	
		Harvesting (Current)											
		Harvesting (Proposed)											



# Conclusions

1. The temperature in Pampanga is increasing for the past years. Rainfall on the other hand, the years 1999 and 2002 had extreme rainfall counts.
2. The trend of the rice yield of Pampanga is positively increasing.



# Conclusions

3. There is a slight and not significant relationship between the temperature and rice yield. While the relationship of rainfall and rice yield is low inverse and significant.
4. For the cropping calendar, the period for the planting and harvesting seasons of the current cropping calendar should be moved one month forward to avoid the heavy rainfalls during the ripening stage of rice plant and during the harvesting seasons.