

Farming systems options to enhance the production and sustainability of cassava in Northwest Cambodia.

Meeting 2nd – 5th July 2019, North Sumatra, Indonesia

Phan Sophanara, Stephanie Montgomery and Eric Wilson

Outline

- Introduction
- Research Objective
- Primary data analyze in 2018
- Economic analysis

1- Introduction



LEGEND	
	Provincial / City
	International Airport
	Domestic Airport
	Port
	Railway Track
	Check Point
	International Boundary
	Provincial Boundary
	District Center

Source: MAFF, 2017

1- Introduction

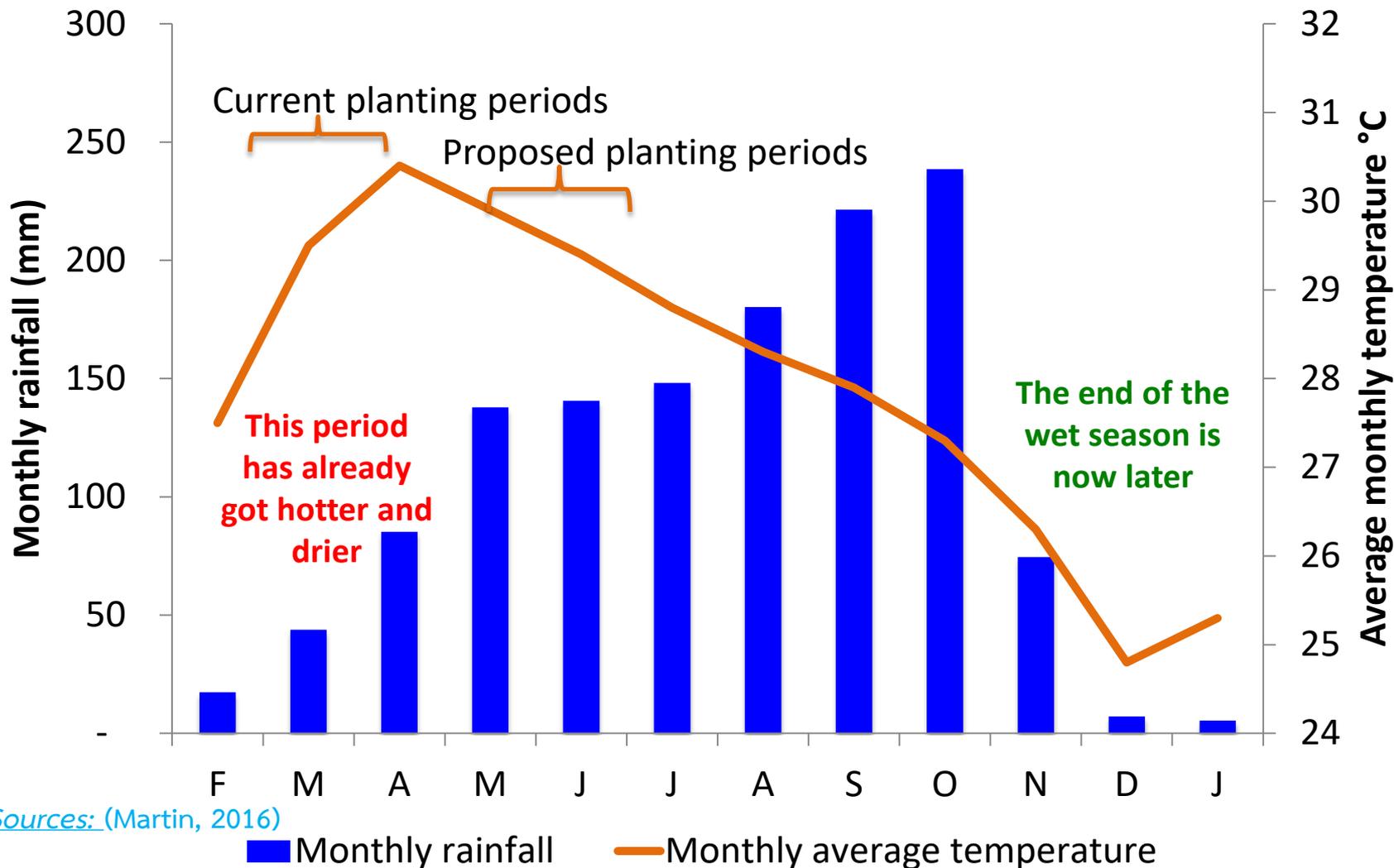
The cassava production in Northwest Cambodia has some problems as below:

- Plant cassava in the dry season (March or April). Now we can see planting all year around.



1- Introduction

Figure 2: Climate change scenario for Battambang/Pailin Province and proposed new planting date



2- Research Objective

1) To determine the feasibility and risk of alternative planting times and methods compared to farmer practice in NW Cambodia.

Time of planting 1: 12 April 2018 –
hard and dry soil

Time of planting 2: 17 May 2018 –
good soil moisture

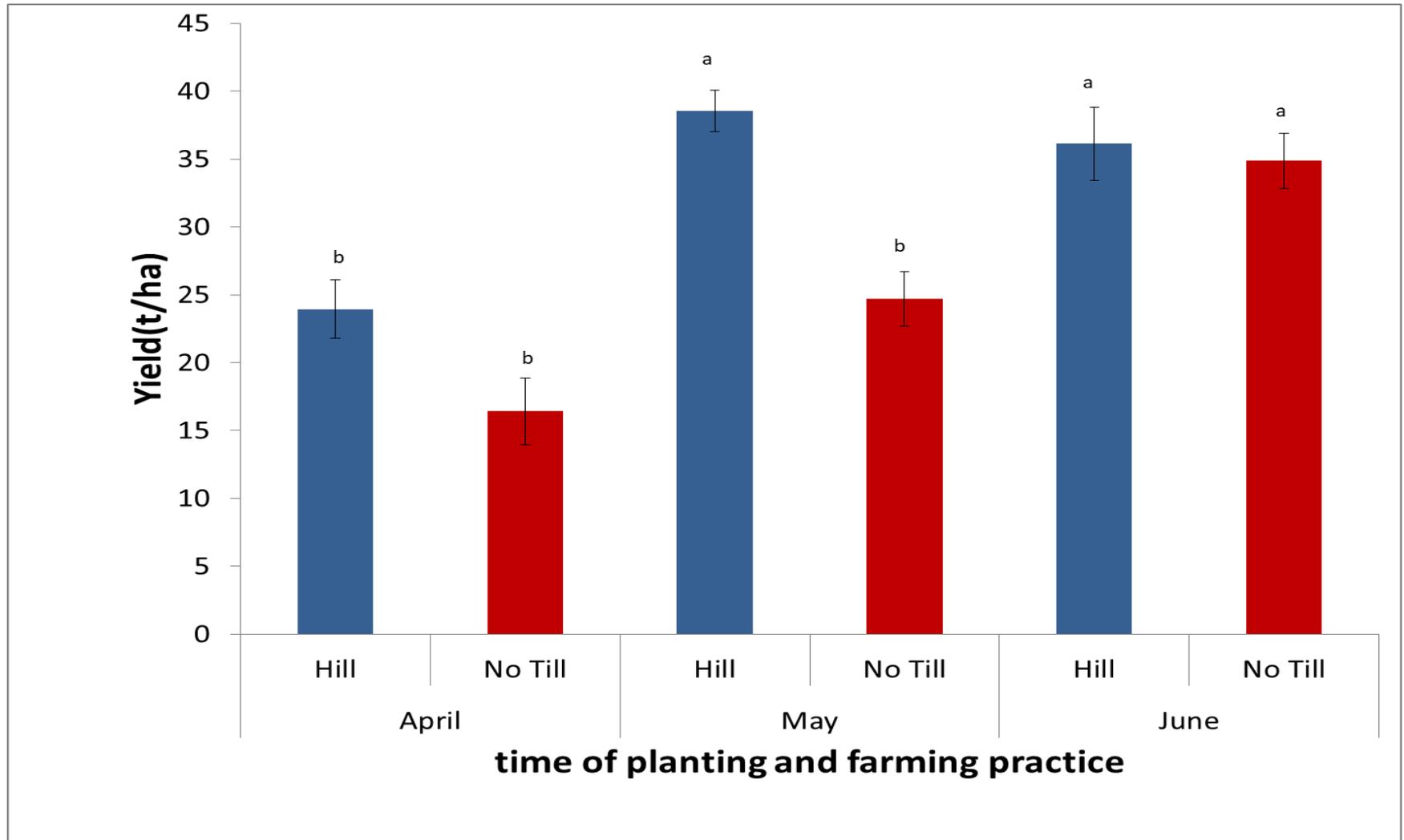
Time of planting 3: 21 Jun 2018 –
good soil moisture



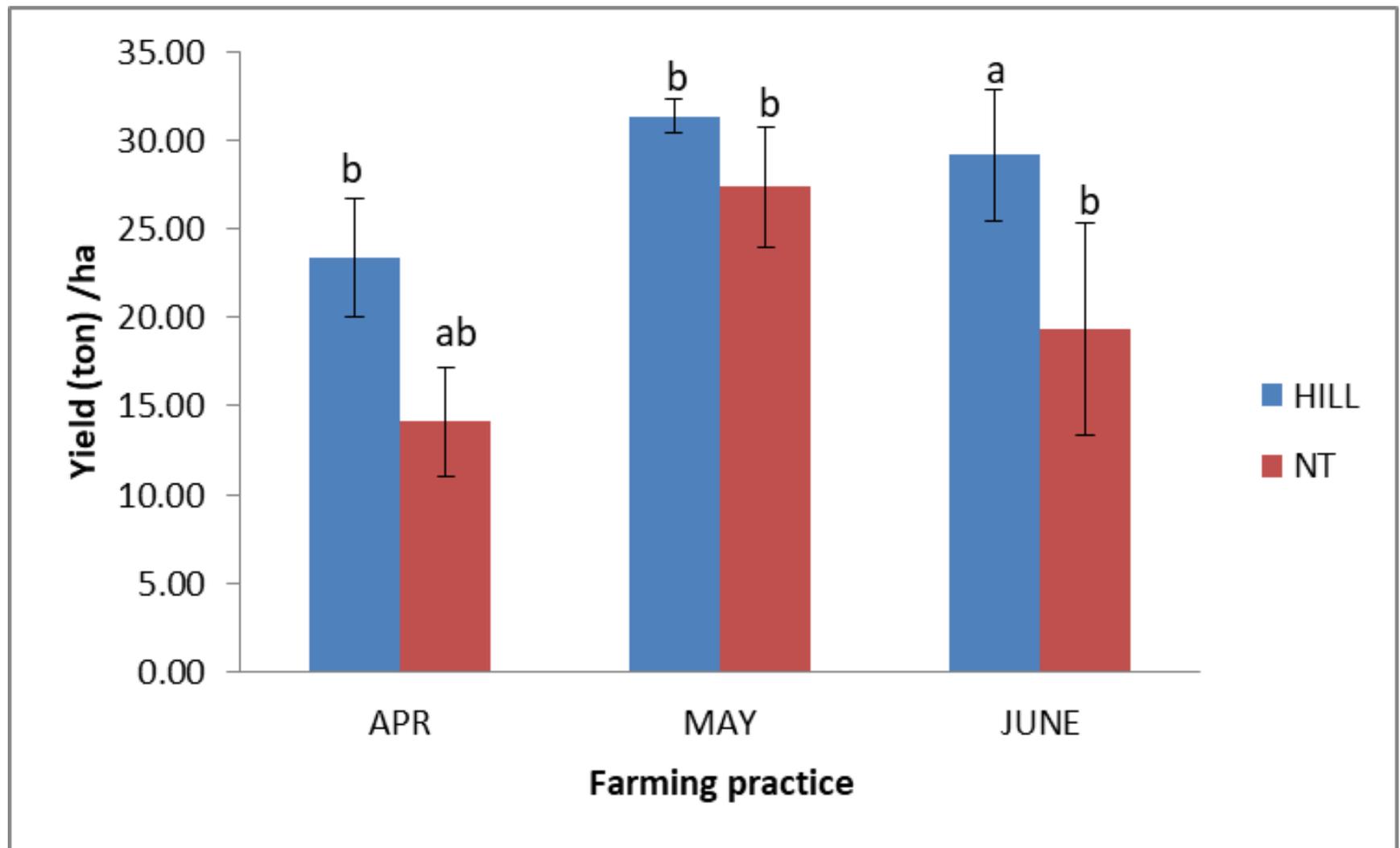
Field activities in 2018



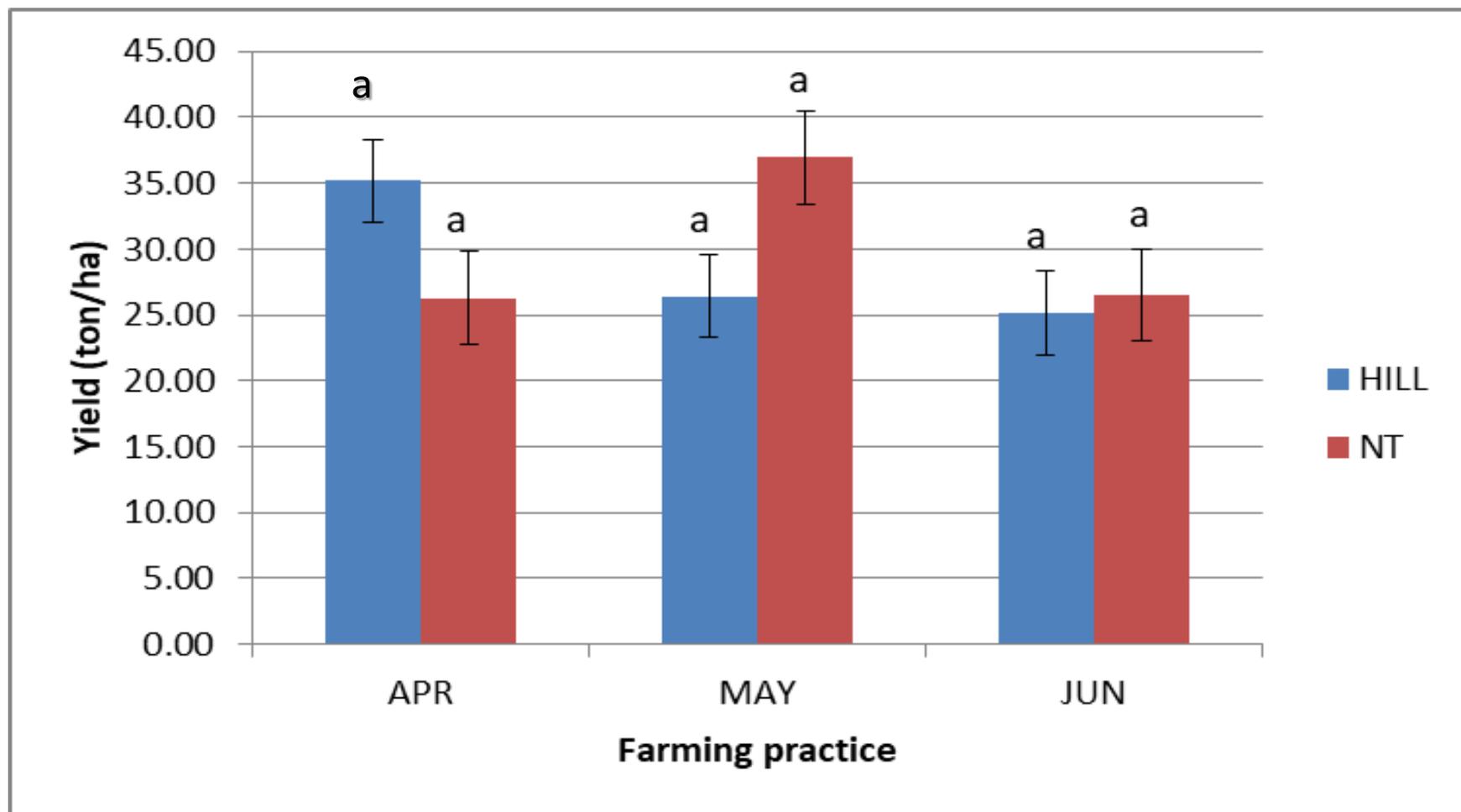
3- Primary data 2017 planting/2018 harvest at Samlout site



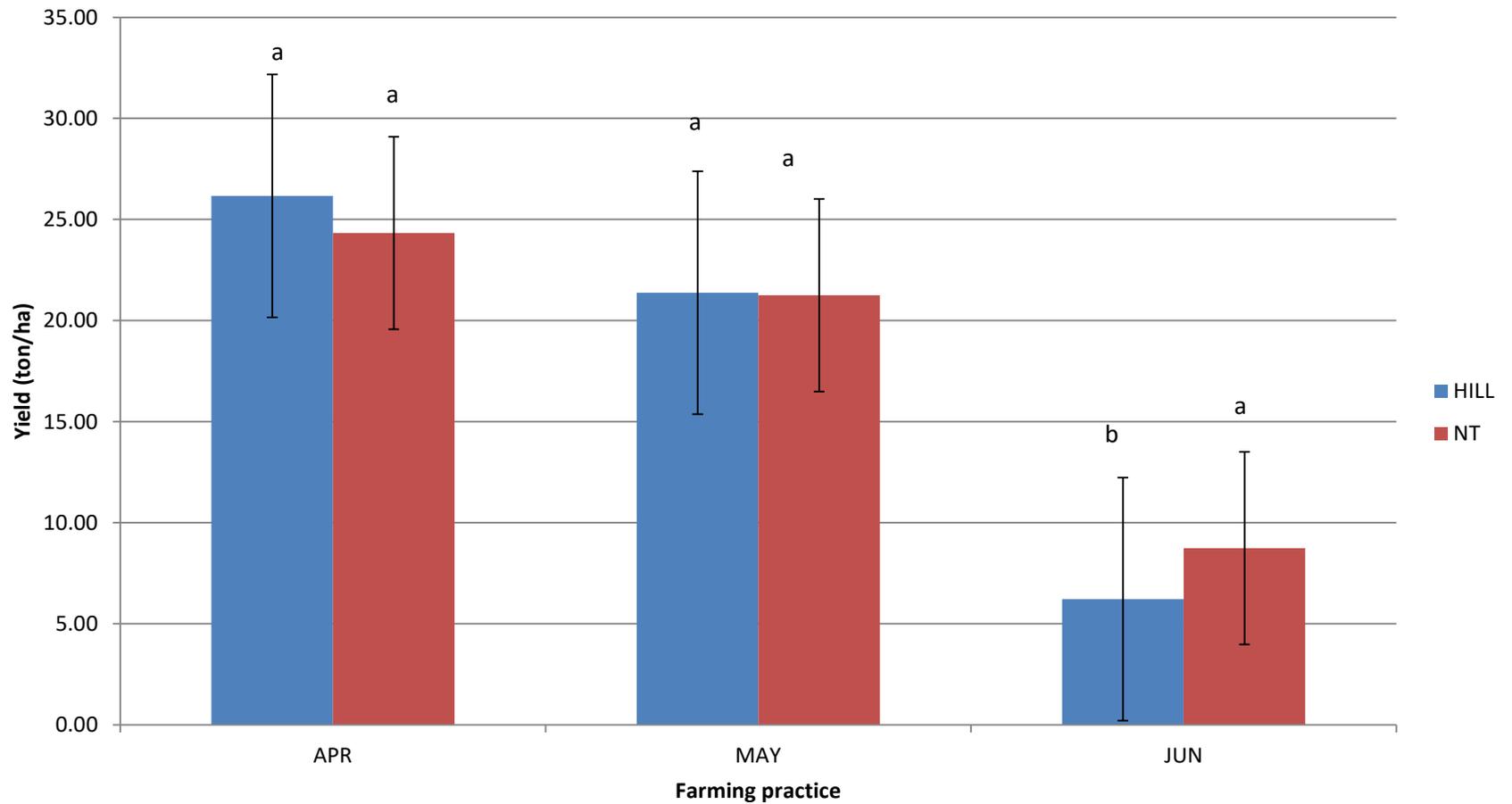
3- Primary data 2018 planting/2019 harvest at Samlout site



3- Primary data 2017 planting/2018 harvest at Pailin site



3- Primary data 2018 planting/2019 harvest at Pailin site



4- Economic analysis

Gross margin TOS trial at Samlout site two years

Farming practice	Gross margin Samlout TOS 2017-18		
	APR	MAY	JUN
HILL	\$ (510.06)	\$ 1,246.82	\$ 1,046.93
NT	\$ (779.14)	\$ 461.41	\$ 1,013.82

Farming practice	Gross margin Samlout TOS 2018-19		
	APR	MAY	JUN
HILL	\$ (792.50)	\$ (311.12)	\$ (666.94)
NT	\$ (2,051.70)	\$ (431.03)	\$ (882.55)

Gross margin TOS trial at Pailin site two years

Farming practice	Gross margin TOS Pailin income 2017-18		
	APR	MAY	JUN
HILL	\$ 341.47	\$ 731.59	\$ 297.22
NT	\$ 21.47	\$ 1,457.01	\$ 180.82

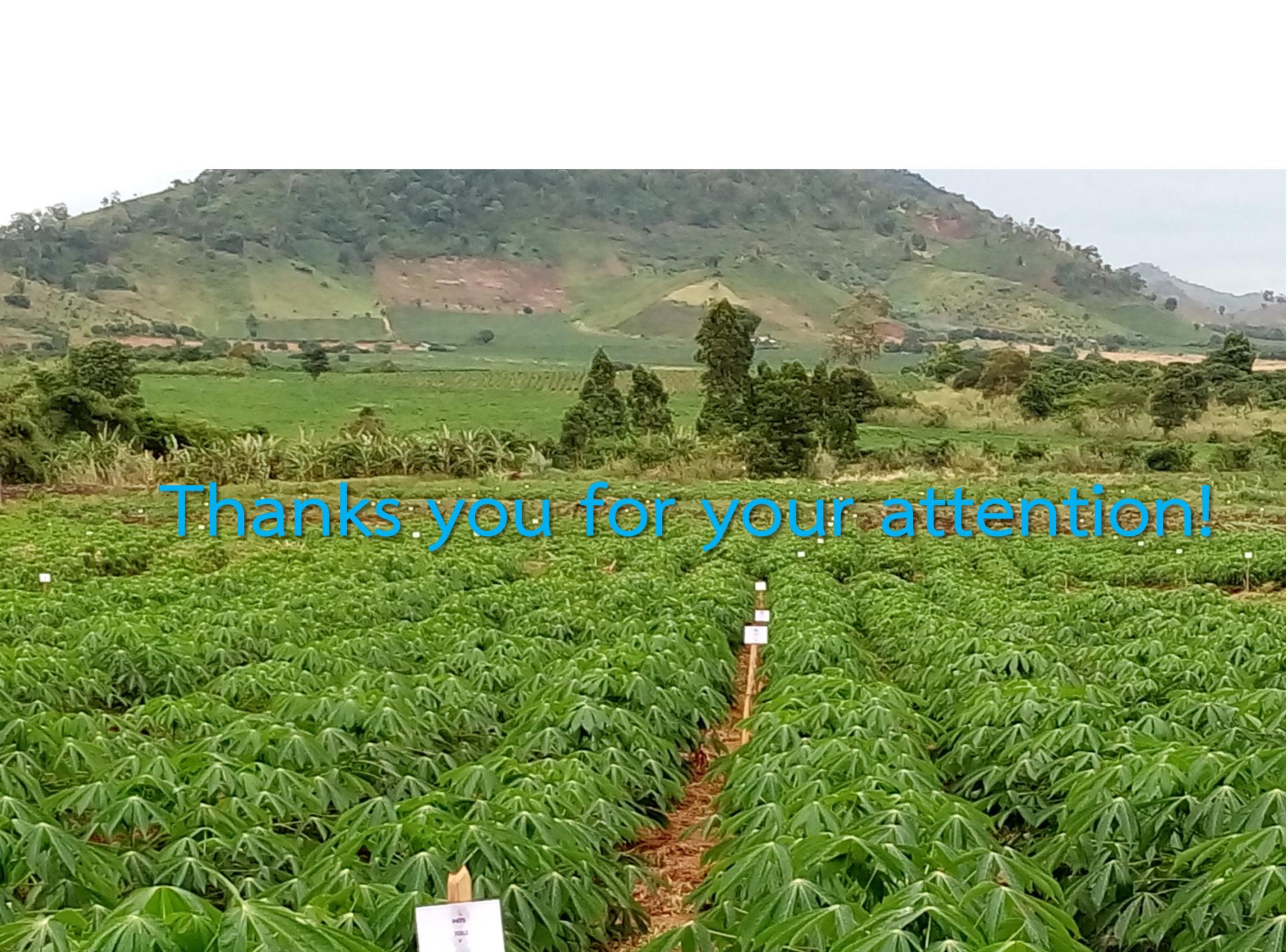
Farming practice	Gross margin TOS Pailin income 2018-19		
	APR	MAY	JUN
HILL	-\$ 724.03	-\$ 826.05	-\$ 1,106.79
NT	-\$ 761.12	-\$ 448.65	-\$ 984.21

Conclusion

- Time of planting and planting method research trial is a part of Sophanara's Master class in SUT, Thailand under scholarship programme and funded by ACIAR.
- Results harvest at Samlout 2017-18, both hill and no till practices planted in June, and hill practice planted in May produced higher yields (35-38 t/ha) than either practice in April (18-24 t/ha)
- At the same site in 2018-19, results showed that both conventional hill and no till planting in May/June significantly higher yield (28-34 t/ha) than planting in April (14-23 t/ha).
- At Pailin in 2017-18, results in no significant difference between any of the treatments.
- In 2018-19 at Pailin, both hill and no till planting in April/May yielded significantly yield (22-27 t/ha) than planting in June (7-9 t/ha).

Conclusion

- At Samlout site in 2017-18, hill up and no till planting in May/June provided the higher gross margin returns than planting in April. In 2018-19, all treatments resulted in negative returns due to low yield, poor quality planting material and the high cost of weed control.
- At Pailin site in 2017-18, hill up and no till planting in May/June provided the higher gross margin returns than planting in April. In 2018-19, all treatments resulted in negative returns due to low yield, and the high cost of weed control.
- Results from two years research in both sites indicated that conventional hill and no till planting in May/June provided positive gross margin return in 2017-18 but in 2018-19, all treatment there were negative returns due to low yield, planting material and high cost of weeding control.
- To improve cassava yield and sustain its production, appropriate management of soil nutrients, and alternative month of planting, good planting materials and weed control measure should be applied.

A wide-angle photograph of a lush green cassava field. The plants are arranged in neat rows, with a dirt path running through them. In the background, there are rolling green hills and a prominent mountain with some reddish-brown patches. The sky is overcast. The text "Thanks you for your attention!" is overlaid in blue, semi-transparent font across the middle of the image.

Thanks you for your attention!