Establishing sustainable solutions to cassava diseases in mainland Southeast Asia

Final Review

Hung Loc Agricultural Research Center (HLARC)

Objective 4: Develop and evaluate economically sustainable cassava seed system models for the rapid dissemination of new varieties and clean planting material to farmers in different value chains and production contexts

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Objective 4 in HLARC

- ✓ **Activity 1: The effects of water availability on cassava yield and starch accumulation**
- ✓ **Activity 2: Effects Planting Density on cassava yield and starch accumulation**
- ✓ **Activity 3: Susceptibility of Cassava Varieties to Cassava Mosaic Disease Trial**
- ✓ **Activity 4: Rapid multiplication by tunnel system**

I OBJECTIVES

The effects of different duration of growth on cassava yield and starch accumulation of different planting material stake grown (Cuttings) and tunnel grown (Plantlets):

- The experiment used plantlet material from the Tunnel to compare the difference between two types of planting material: plantlet from the Tunnel and from cuttings material.

Cuttings

Plantlets

II MATERIALS AND METHODS

- **Location:** HLARC, Dong Nai province.
- **Variety:** TMEB419 (i.e., HN1 in Viet Nam)
- **Material:** Cutting and Plantlet
- **Fertiliser rate**: 100N - 50P2O5 - 100K2O and fertilizers will be applied at 1 month after planting, after first weeding.
- **Weed control:** Apply herbicide after planting and hand weeding when weed small.
- **Harvest:** At 8, 9, 10 months after planting, pull out the plants in effective plots, cut off roots and weigh fresh roots.

II MATERIALS AND METHODS

- **Experimental design and Treatments:**

+ *Design:*

- RCBD design with 3 replications
- Plant spacing: 1m x 1m
- Plot: Cutting: 6 plants x 5 rows

  Plantlet: 6 plants x 5 rows

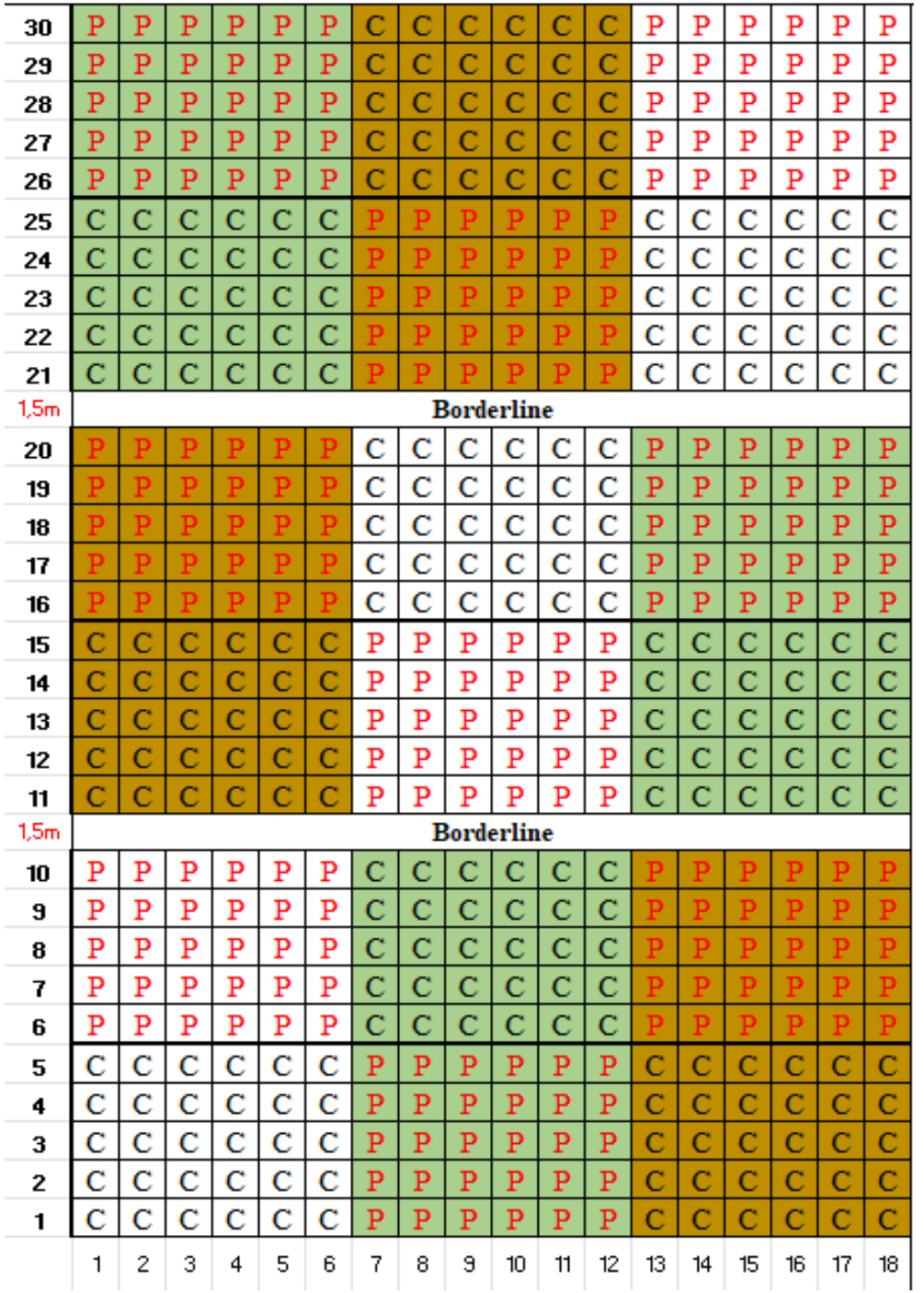
+ *Treatments: 3 harvest times:*

1. The 1st harvest: After 8 month planting
2. The 2nd harvest: After 9 month planting
3. The 3rd harvest: After 10 month planting

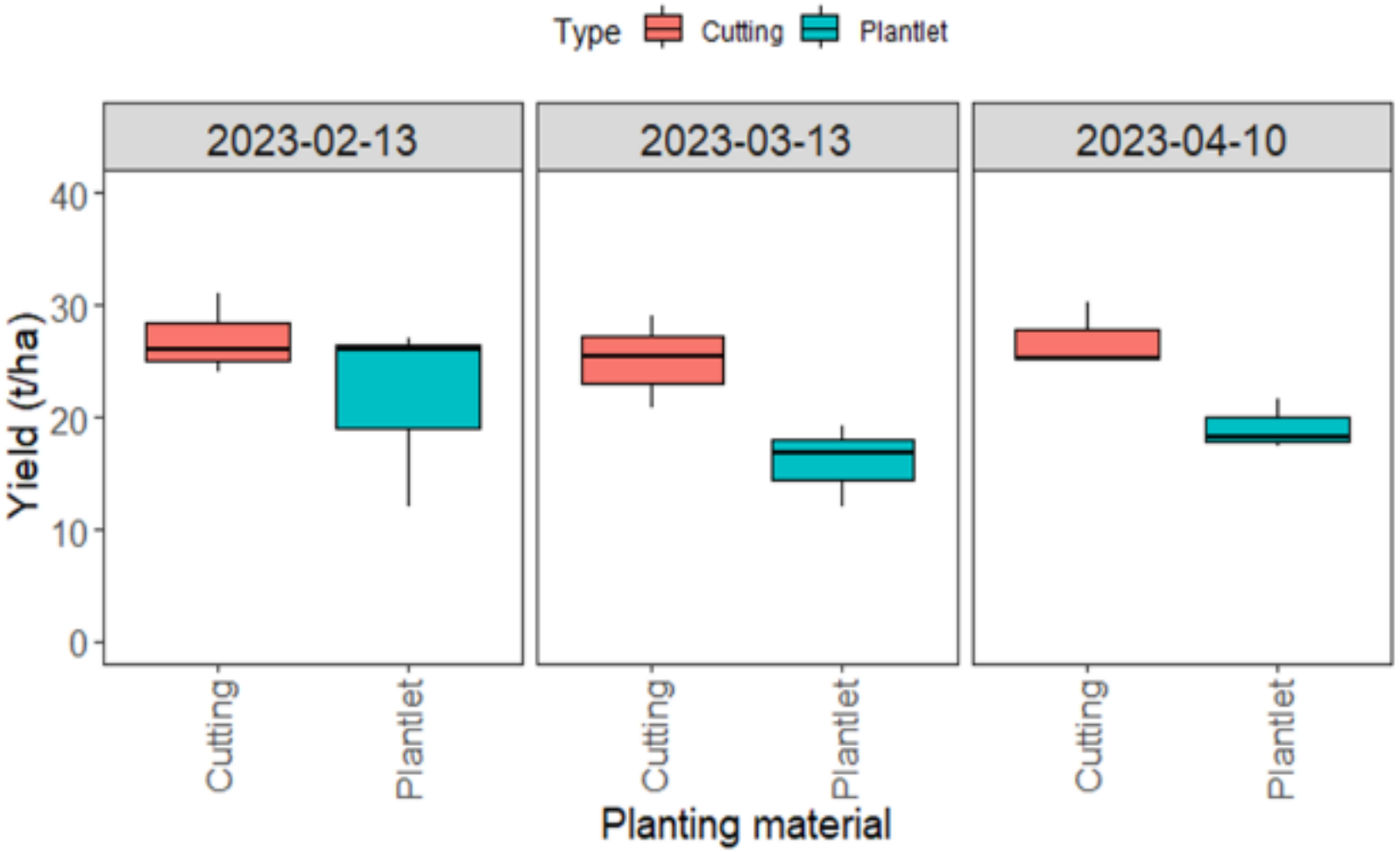
II MATERIALS AND METHODS

Layout

Planting date	11/06/2022
	The 1st Harvest
	The 2nd Harvest
	The 3rd Harvest
P	Plantlets
C	Cuttings

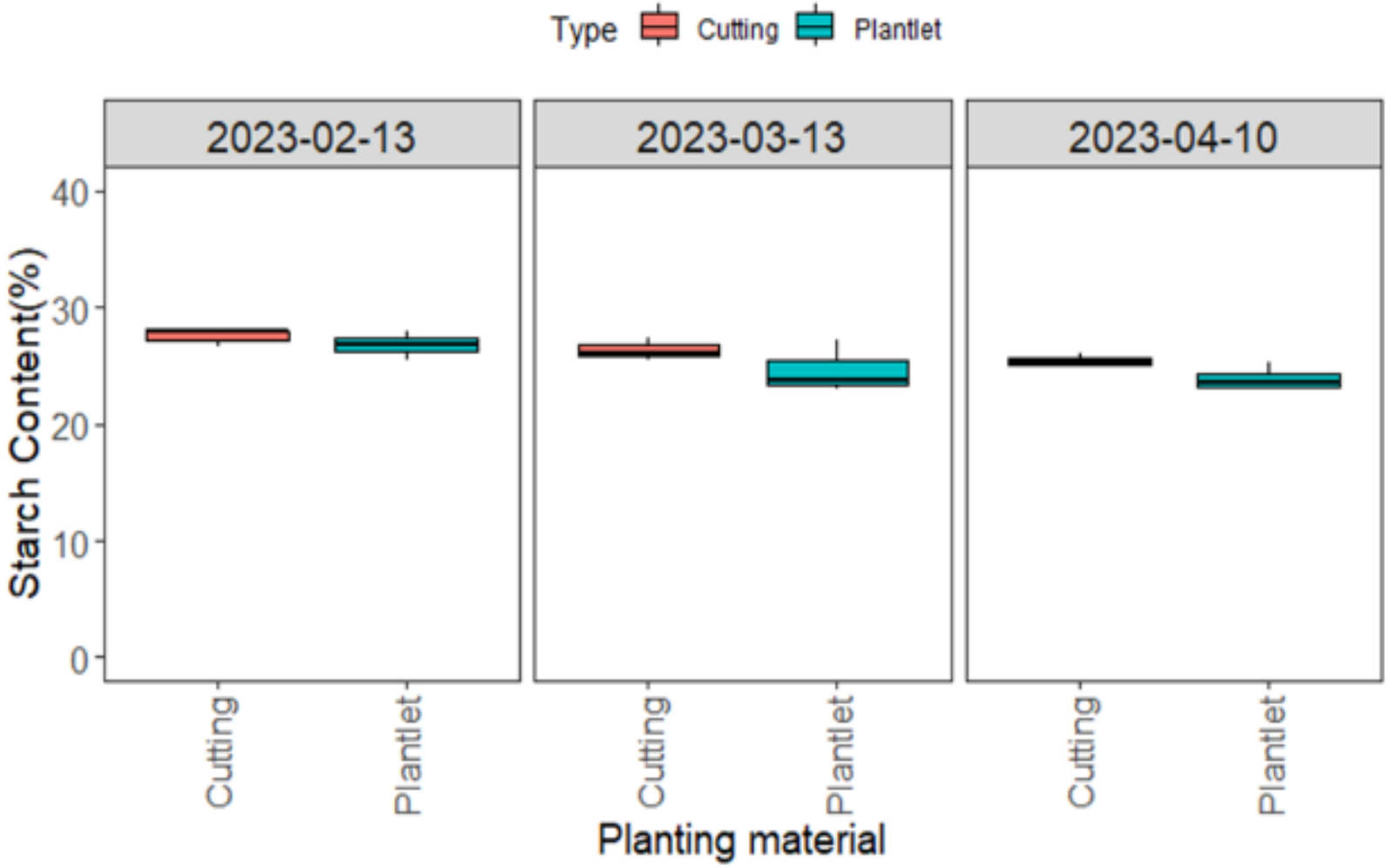


III RESULTS AND DISCUSSIONS



Fresh root yield (t ha-1) of different planting material

III RESULTS AND DISCUSSIONS



Starch content (%) of different planting material

IV CONCLUSIONS AND RECOMMENDATION

❖ CONCLUSIONS

• Based on the tables data and the analysis of the experiment comparing different harvest times for materials grown from Plantlets and Cuttings, it can be concluded that cassava grown from cuttings yields higher and better tuber quality compared to cassava grown from Plantlets.

• Furthermore, the optimal time to harvest for the highest starch content in TMEB419 cassava variety, using both types of materials, is when the cassava plant reaches 8 months after planting.

IV CONCLUSIONS AND RECOMMENDATION

❖ Recommendation

- From the results obtained from the experiment, it was determined that the harvest time of TMEB419 cassava variety is 8 months after planting, so it is necessary to encourage farmers to achieve the best results when using TMEB419 cassava variety for farming manufacture.

THE PICTURES OF THE EXPERIMENT

Planting date

THE PICTURES OF THE EXPERIMENT

1 MONTH AFTER PLANTING DATE

THE PICTURES OF THE EXPERIMENT

Use a specialized scale to measure starch content

THE PICTURES OF THE EXPERIMENT

Cutting

Plantlet

After 8 month planting date

THE PICTURES OF THE EXPERIMENT

Cutting

Plantlet

After 9 month planting date

THE PICTURES OF THE EXPERIMENT

Cutting

Plantlet

After 10 month planting date

thank you
gracias
danke
謝謝
obrigado
merci
ngiyabonga
شكراً جزيلاً
teşekkür ederim
go raibh maith agat
mochchakkeram
dziękuję
sukriya
kop khun krap
bedankt
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obrigada
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