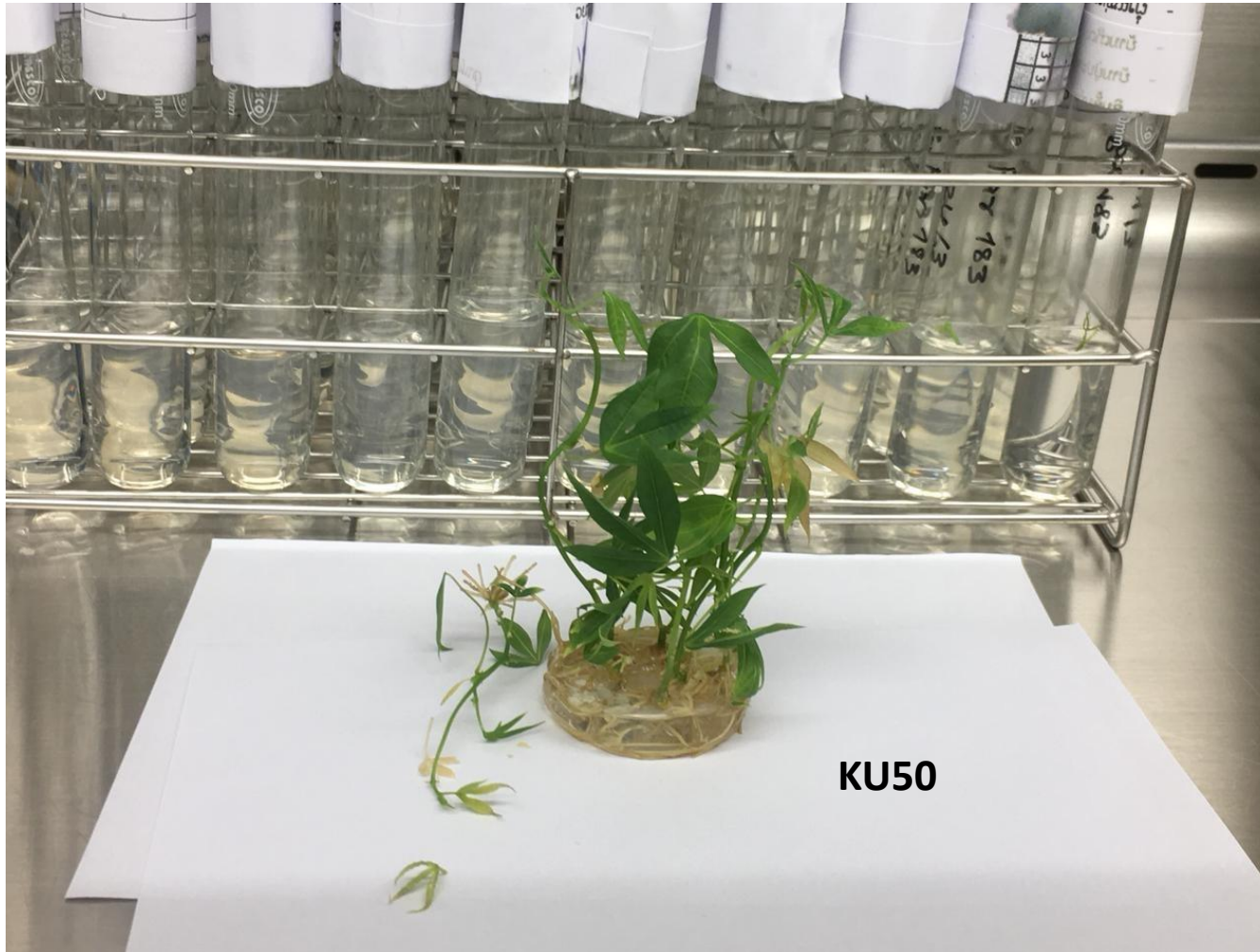




Establishing sustainable solutions to cassava diseases in mainland Southeast Asia



In vitro multiplication
of CASSAVA



In vitro plant received



1. KU50 from CIAT-Colombia
2. TMEB419 (H1), IBA920057 (H2), IBA972205 (H3), IBA980505 (H4) and IBA980581 (H5) from AGI (Vietnam)
3. 99 Clones from CIAT-Colombia core collection
4. 61 Clones from CIAT-Colombia core collection
5. 72 Clones from CIAT-Colombia core collection



In vitro plant received 2022

1. 8 Clones CIAT-Colombia (AR_CR)
2. 322 Clones CIAT-Colombia core collection



Rapid *In vitro* multiplication and rooting



Training from CIAT
By Mr. Roosevelt and discuss with him



Culture for propagation using E4 medium
and Culture 30-45 days per time



Culture for Rooting using N17 medium
about 30 days and Strang by outside
condition 1-2 days before more to green
house

The Activities in the Greenhouse



**Plantlet in TC Lab
washing by sterilize water**



**Cover by plastic cup
5-7 days**



**1-1.5 months
Plant under acclimatization**

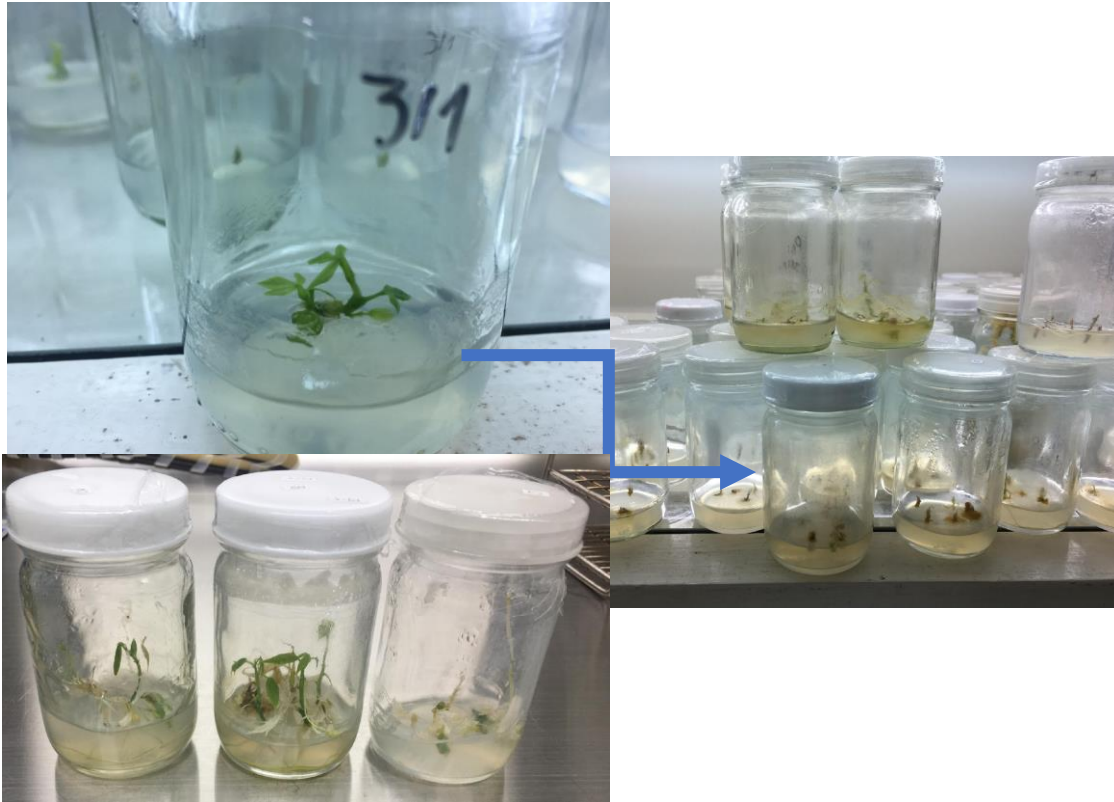


**3 months ready to
move to filed**



Growth in the filed

Some problem we got during activities



- first The plant can't growth on this medium we prepared
- up to now plant can growing well on medium



- The plantlet can't survivor on coco peat
 - When the plantlet got 1 or 2 months some clone got diseases
- up to now we got method from CIAT
Mr. Roosevelt and CIAT team in Lao



Produce cassava from Tissue culture and import



Season 2020-21

Type	Received from	Arrival date	Number of plant received	Number of plant sub culture	Number of plant transplanted for hardening	Number of plant transplanted to the field	Comments
KU50	CIAT, Cali, Colombia	2019	100	1,700	1,370	1000	- First Problem on medium Plant can't growth on the medium
TMEB419 (H1)	AGI, Hanoi Vietnam	09\01\2020	200 + 100	36 + 600	26	20	- First problem transplanted to green house
IBA920057 (H2)	AGI, Hanoi Vietnam	09\01\2020	200	450	388	370	- First problem transplanted to green house
IBA972205 (H3)	AGI, Hanoi Vietnam	09\01\2020	200	557	370	300	- First problem transplanted to green house
IBA980505 (H4)	AGI, Hanoi Vietnam	09\01\2020	200	200	201	387	- First problem transplanted to green house
IBA980581 (H5)	AGI, Hanoi Vietnam	09\01\2020	200	329	312	327	- First problem transplanted to green house
99 Clones	CIAT, Cali, Colombia	04\01\2021	198	640	20\clone	480	- Transport contaminated
61 Clones	CIAT, Cali, Colombia	2021	122	1,025	25\clone	820	- Transport contaminated
72 Clones	CIAT, Cali, Colombia	12\05\2021	536	1,675	25\clone	1,340	- contaminated



Update Produce cassava from Tissue culture and import



Season 2021-22

Type	Received from	Arrival date	Number of plant received	Number of plant sub culture	Number of plant transplanted for hardening	Number of plant transplanted to the field	Comments
KU50	CIAT, Cali, Colombia	2019	100	1,700	1,370	341	- First Problem on medium Plant can't growth on the medium
TMEB419 (H1)	AGI, Hanoi Vietnam	09\01\2020	200 + 100	36 + 600	260	120	- First problem transplanted to green house
IBA972205 (H3)	AGI, Hanoi Vietnam	09\01\2020	200	557	250	130	- First problem transplanted to green house
IBA980581 (H5)	AGI, Hanoi Vietnam	09\01\2020	200	329	312	108	- First problem transplanted to green house
99 Clones	CIAT, Cali, Colombia	04\01\2021	198	640	20\clone (1,980)	24	- Transport contaminated
61 Clones	CIAT, Cali, Colombia	2021	122	1,025	25\clone (1,525)	41	- Transport contaminated
72 Clones	CIAT, Cali, Colombia	12\05\2021	536	1,675	25\clone(1,675)	856	- contaminated



Update Produce cassava from Tissue culture and import



Season 2022-23

Type	Received from	Arrival date	Number of plant received	Number of plant sub culture	Number of plant transplanted for hardening	Number of plant transplanted to the field	Comments
AR35-1	CIAT, Cali, Colombia	07\2022	50	32	250	100	- Good health
CR25-4	CIAT, Cali, Colombia	07\2022	50	50	275	100	- Good health
CR24-4	CIAT, Cali, Colombia	07\2022	50	52	X	X	- Good health
CR24-3	CIAT, Cali, Colombia	07\2022	50	27	455	100	- Good health
CR13-8	CIAT, Cali, Colombia	07\2022	50	43	250	100	- Good health
CR24-16	CIAT, Cali, Colombia	07\2022	50	80	280	100	- Good health
CR27-20	CIAT, Cali, Colombia	07\2022	50	47	357	50	- Good health
CR52A-4	CIAT, Cali, Colombia	07\2022	50	73	270	100	- Good health
Clone 322	CIAT, Cali, Colombia		10 per earl	670	364 per 14 clone		- contaminated because the clone were very old and have been infected before before being sent to Lao.
KU50	CIAT, Cali, Colombia	2019	100	700	623	200	- Good health
TMEB419 (H1)	AGI, Hanoi Vietnam	09\01\2020	200 + 100	1,000	140 + 651	738	- Good health



Up Date Produce cassava from Tissue culture and import



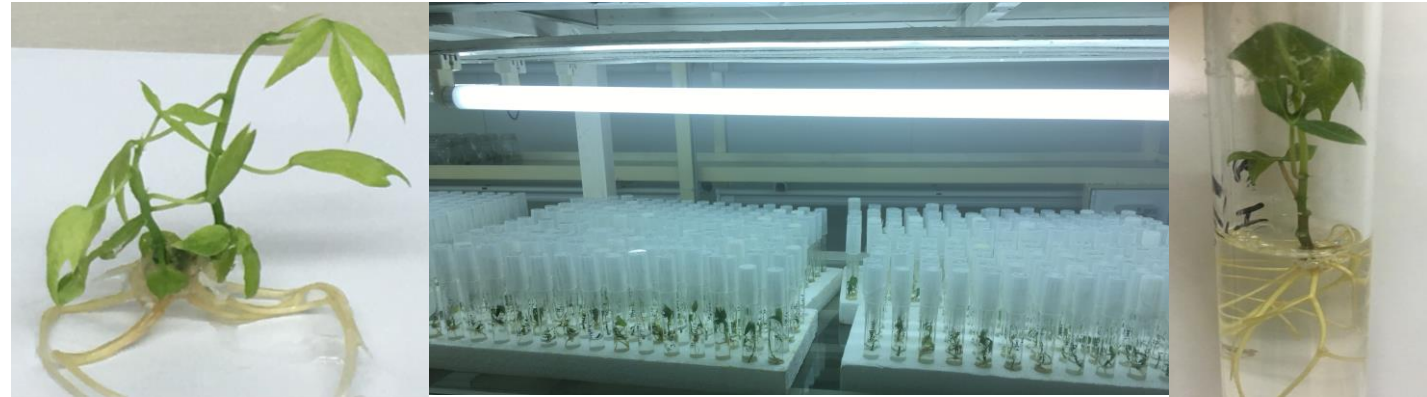
Season 2022-23

Type	Received from	Arrival date	Number of plant received	Number of plant sub culture 2023	Number of plant transplanted for hardening	Number of plant transplanted to the field	Comments
KU50	CIAT, Cali, Colombia	2019	100	700			- Good hearth
TMEB419 (H1)	AGI, Hanoi Vietnam	09\01\2020	200 + 100	1,000			- Good hearth
IBA972205 (H3)	AGI, Hanoi Vietnam	09\01\2020	200	270			- Good hearth
IBA980581 (H5)	AGI, Hanoi Vietnam	09\01\2020	200	300			- Good hearth
8 Clones	CIAT, Cali, Colombia	07\2022	50 per clone	300 per clone			- Good hearth
Another clone	CIAT, Cali, Colombia	07\2022	10 per clone	50 per clone			- Good hearth

Remark : We will move to greenhouse In November 2023



Check sample TC Lab



In vitro multiplication and rooting



The Activities in the Greenhouse



Visitor





Thank you for your attention