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**Programme Activity Report: Non-Aligned Movement Centre for South-South Technical Cooperation (NAM CSSTC) Sponsorship of the “International Certificate Course for Coconut Development Officers,” 4 October – 5 November 2021**

**List of Trainers/Facilitators (alphabetically sorted):**

1. Dr. A D N T Kumara
2. Dr. Athula Nainanayake
3. Dr. Auchithya Dissanayake
4. Dr. C S Herath
5. Dr. C Yalegama
6. Mrs. D Hewapathirana
7. Mrs. D K R P L Dissanayake
8. Dr. D M D I Wijebandara
9. Ms. H R Fernando
10. Dr. H T R Wijesekara
11. Dr. I M S K Idirisinghe
12. Dr. Jayantha Senanayake
13. Dr. K Mohotti
14. Mrs. K V N N Jayalath
15. Dr. Lalith Perera
16. Ms. M K F Nadeesha
17. Dr. M K Meegahakumbura
18. Dr. N A Tennakoon
19. Dr. N S Aratchige
20. Mr. Rathnayake
21. Mr. Roshan Silva
22. Mr. Ruwan Samarasinghe
23. Mr S A S T Raveendra
24. Mrs. S Udumann

25. Dr. Sanathanie Ranasinghe

26. Ms. T H Chandrathilake

27. Dr. Uwasara Dissanayake.

**List of NAM CSSTC-Sponsored Participation (alphabetically sorted):**

No	Name	Institution	Country
1.	Sive Thea	Prek Leap National Institute of Agriculture	Cambodia
2.	Burhanuddin	Indonesia Friends of Coconut	Indonesia
3.	Cazal Elise	Association Arbofruits	New Caledonia
4.	Cuong Truong Tri	Betrimex JSC	Vietnam

**Distribution of Background**

No	Background	Percentage
1.	Government	0%
2.	Higher education institution	25%
3.	Private sector	75%

**Programme Activity Report**  
**Non-Aligned Movement Centre for South-South Technical Cooperation**  
**(NAM CSSTC) Sponsorship of the “International Certificate Course for**  
**Coconut Development Officers”**  
**4 October – 5 November 2021**

**Background**

Although coconut producing countries are devoted to raising awareness about social welfare and the impact of harmful coconut product advertisements, it is acknowledged that many agencies face a number of obstacles.

A training is required to recognise problems such as skilled labour, smallholder processing, and a lack of enthusiasm among future generations, as well as existing Senile plants, fluctuating copra prices, and the COVID-19 pandemic. Capacity building helps countries overcome these challenges.

Furthermore, given the numerous applications of coconut, extensive coconut training areas assist boost the well-being of a larger portion of the population. Improving coconut producers’ capacities and know-how to make value-added coconut products also assist coconut-producing countries to meet their national development goals.

To that end, the Non-Aligned Movement Centre for South-South Technical Cooperation (NAM CSSTC) was offering sponsorships to participants from Cambodia, Indonesia, New Caledonia and Vietnam in participating in the International Coconut Community (ICC) and the Coconut Research Institute (CRI) of Sri Lanka’s “International Certificate Course for Coconut Development Officers.”

**Evaluation**

Following the completion of the training series, participants were requested to complete a self-assessment, which yielded the following results:

- Prior to the programme, participants admitted to having limited abilities in conducting training on coconut development. Participants believed that their talents at the intermediate/medium level as a result of the training.
- One of the participants stated that their ability to provide direction to employees or juniors had improved from medium to high level.
- After completing the course, one participant reported an increase in understanding on the issue of coconut growth from a low to a high level.

- In terms of trainers/facilitators' quality, participants gave the following ratings:
  - Participants gave a score of 70% for trainers' and facilitators' area of expertise;
  - Participants gave a score of 70% for trainers' and facilitators' sensitivity to the cultural differences of participants from different countries;
  - Participants gave a score of 70% for trainers' and facilitators' attentiveness.
- BEFORE the training, the participants reported an average score of 47.5 percent for their knowledge and abilities in the coconut development subtopics that were taught, which included improvement and breeding, organic fertiliser certification, pest and disease control, and counselling. Participants reported an average score of 72.5 percent for their knowledge and abilities in similar subtopics AFTER attending the programme. There is a 25% rise as a result of this.
- The participants rated the difficulty level of the training material a score of 80% for its appropriateness with the knowledge they need.
- Participants rated the training materials 90 percent for its applicability in their sector of work.
- The participants assigned the training material a score of 70% for its compatibility with the skill requirements of the job/designation/position.
- The participants reported an average of 80% confidence in growing coconuts by themselves.

## **Conclusion**

Throughout the organisation of the training evaluation, the NAM CSSTC draws these conclusions:

- During training, participants experience Zoom fatigue. As a result, a longer lag time of at least 1.5 hours between one material and the next is required for the implementation of the next virtual training session.
- Given the scope of the topics covered in the programme, each topic requires a longer length for successful learning.
- Participants intend to carry out the following actions as part of their action plan:
  - Managing seedlings, plant pests, and coconut production through intercropping;
  - Applying knowledge of replanting in their country and pass on knowledge learned through extension programmes to extension professionals in their country.

Furthermore, they will employ the model offered by the trainers and facilitators, for example, as a trial run for planting coconut land spanning 10-100 hectares.

- One of the benefits of this course is the vast and in-depth knowledge supplied. The absence of practical exercises, given that the events were held digitally, was perceived as a disadvantage by the participants. Aside from that, there is a brief period of time set aside for discussion between participants and trainers/facilitators.

# PHOTO DOCUMENTATION



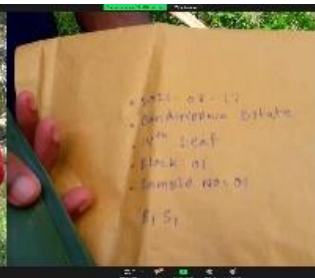
Papaya as an intercrop



Severe N deficiency Palm



N deficiency in coconut palm fronds



### Cation Exchange Capacity

Measure of the total negative charges within the soil that adsorb plant nutrient cations such as calcium (Ca<sup>2+</sup>), magnesium (Mg<sup>2+</sup>) and potassium (K<sup>+</sup>)

As such, the CEC is a property of a soil that describes its capacity to supply nutrient cations to the soil solution for plant uptake.

### The Irrigation schedule suggested for adult palms in Sri Lanka by the Coconut Research Institute

Soil type	Leachings rate (mm/hr)	Irrigation condition (Day)	Irrigation interval (Day)
Very sandy loam	10	2	2-4
Slightly sandy loam	8	4	4-6
Sandy loam	6	6	6-8
Loam	4	8	8-10
Clay loam	2	10	10-12
Clay	1	12	12-15

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### Moisture conservation and minimize the losses due to drought

- Tying up leaves of the young seedlings
- Deep planting: only in well drainage soils

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### PENUTUPAN ACARA TRAINING PROGRAMME FOR COCONUT DEVELOPMENT OFFICERS

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### DM requirement: 2 out of different growth stages (SIT)

DM requirement increases up to 9<sup>th</sup> stage

There is a very clear compo between already developing (fruit lead of the palm) and the opened inflorescence of a palm photosynthetic assimilates.

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### Measured by Portable Photosynthesis meter

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### PHOSPHORUS (P)

**Components** → Part of the cell nucleus

**Functions** → Metabolism of proteins, fats etc. Cell divisions, Production of Enzymes, Root growth, Energy transportation

Take as Orthophosphate H<sub>2</sub>PO<sub>4</sub><sup>-</sup> or HPO<sub>4</sub><sup>2-</sup>

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### Pheromone traps for Rhinoceros Beetle

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### Planting System

System of planting

- Rectangular: 30' x 30'
- Square: 20' x 20'
- Triangular: 30' x 30' x 30'

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### Biological control of black beetle

heromone traps

[one trap for 5 A.c.]

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### R-deficient coconut

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### Maintain the correct manure circle

planting with good and uniform area

10-15 years depending

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### Control on coconut mite and predator mite

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### Dry matter partitioning

Leaf area index → Light interception → Photosynthesis → Respiration → Dry matter available for growth

Dry matter available for growth is partitioned to: Root, Stem, Leaves, Fruits, DMC, Yield

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