Report on the Establishment Of Yam Multiplication Facility For Crop Research Institute Kumasi, Ghana And National Centre For Agronomic Research, Bouake, Cote d'Ivoire

SAH facilities for Africa yam partners are near completion as two other facilities were set up at CRI and CNRA. This takes the number of setups so far to 5 (IITA-Abuja in February 2021, UAC-Benin March 2021; SARI-Ghana July 2021; CRI-Ghana November 2021 and CNRA-Cote D'ivoire December 2021.

CSIR-CRI SAH project: The SAH facility at CRI Kumasi is an apartment on the ground floor of the Biotechnology Building. This apartment which is now designated as SAH laboratory for CRI, was the kitchen with a store that has now become the culture and growth room. In contrast, the laundry room now becomes the storeroom for this yam multiplication facility. The area designated as GR at CRI has the capacity for 20 shelves capable of accommodating 90,000 plants at full capacity. This translates into 45000 turnovers per cycle. This facility has the capacity for Pre-basic and not Basic seed production. Existing screen houses and an aeroponics system are situated around this SAH laboratory, which is within the Biotechnology building in which the yam tissue culture laboratory is located. This array of complimentary high-ratio propagation technologies has the capacity the strengthen the yam seed system in Ghana.

Personnel trained: Five staff (Yam breeding program = 2; Biotechnology =3 and three intern students of the institute participated in the training sessions. These are staff who are active in yam multiplication at the breeding program and the Biotechnology Unit of the institute.

Challenge: There is still lots of cleaning and restructuring work yet to be carried out at the SAH laboratory facility of CRI. As of the time of this capacity building, a shelf with a capacity for

4500 seedlings was made available. It is hoped that more shelves will be constructed to fill up the growth rooms.

CNRA-SAH Project: A stand-alone standard building comprising a GR= 68 m^2, culture room, change room, Store, two toilets, and a staff room. Locally sourced technicians within the institute and the neighborhood constructed the shelves and the light fittings.

Plate A: Cross section of the staff during the training at CRI

Plate B: A just constructed shelf being fitted with lightning

The SAH facility at the Nation Centre for Agronomic Research CNRA has the capacity to produce over 81000 seedlings per cycle and about 324,000 at maximum capacity. Establishing a formal seed system for Cote D'Ivoire and capacity building for enrolled players (foundation and certified sed producers) by the institute for a sustainable seed value chain is necessary. This facility will revolutionize the yam breeding scheme and the seed system in Cote d'Ivoire when fully harnessed. This facility is well sufficient for breeder and foundation seed production.

The dedicated staffs for this laboratory are about 6, excluding students. Nd they are under the. supervision of Dr. Diby Konan Evrice.

Plate C: Front view of the SAH building at CNRA

Plate D: A cross section of the staff trained at CNRA

S/No	Materials needed	Quantity	Status	Cost (USD)	Responsible Institute
1	Tork MH towel	2	Delivered	19.28	CNRA/CRI
2	Nalgene dispenser	2	Delivered	299.13	CNRA/CRI
3	TS3 Substrate	10	Delivered	100.83	CNRA/CRI
4	SAH boxes	4	Delivered	20.24	CNRA/CRI
5	2 L beaker	1	Delivered	11.9	CNRA/CRI
6	Forceps	2	Delivered	3.58	CNRA/CRI
7	Blade holder	2	Delivered	13.83	CNRA/CRI
8	Blade	2	Delivered	10.22	CNRA/CRI
9	Ethanol(2.5litres)	2	Delivered	18.32	CNRA/CRI
10	50 LED tube	1	Delivered	1032	CNRA-50%/CRI-50%
11	Fertilizer (MG)	1	Delivered	45.34	CNRA/CRI
11	Nutrient salts	6	Delivered	143.36	CNRA/CRI
12	Per diem (Estimated.)			3,200	CNRA-20%; CRI-80%
13	Fueling and vehicle maintenance			750	CNRA/CRI
	Total			5668.03	