



TOOLS4SEEDSYSTEMS:

SESSION 5: Activities in virtual countries and a look at Haiti's seed systems assessment

SHARING EXPERIENCES AND LESSONS
LEARNED FOR FUTURE

ONLINE EVENT – DEC 7TH 2023

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Outline

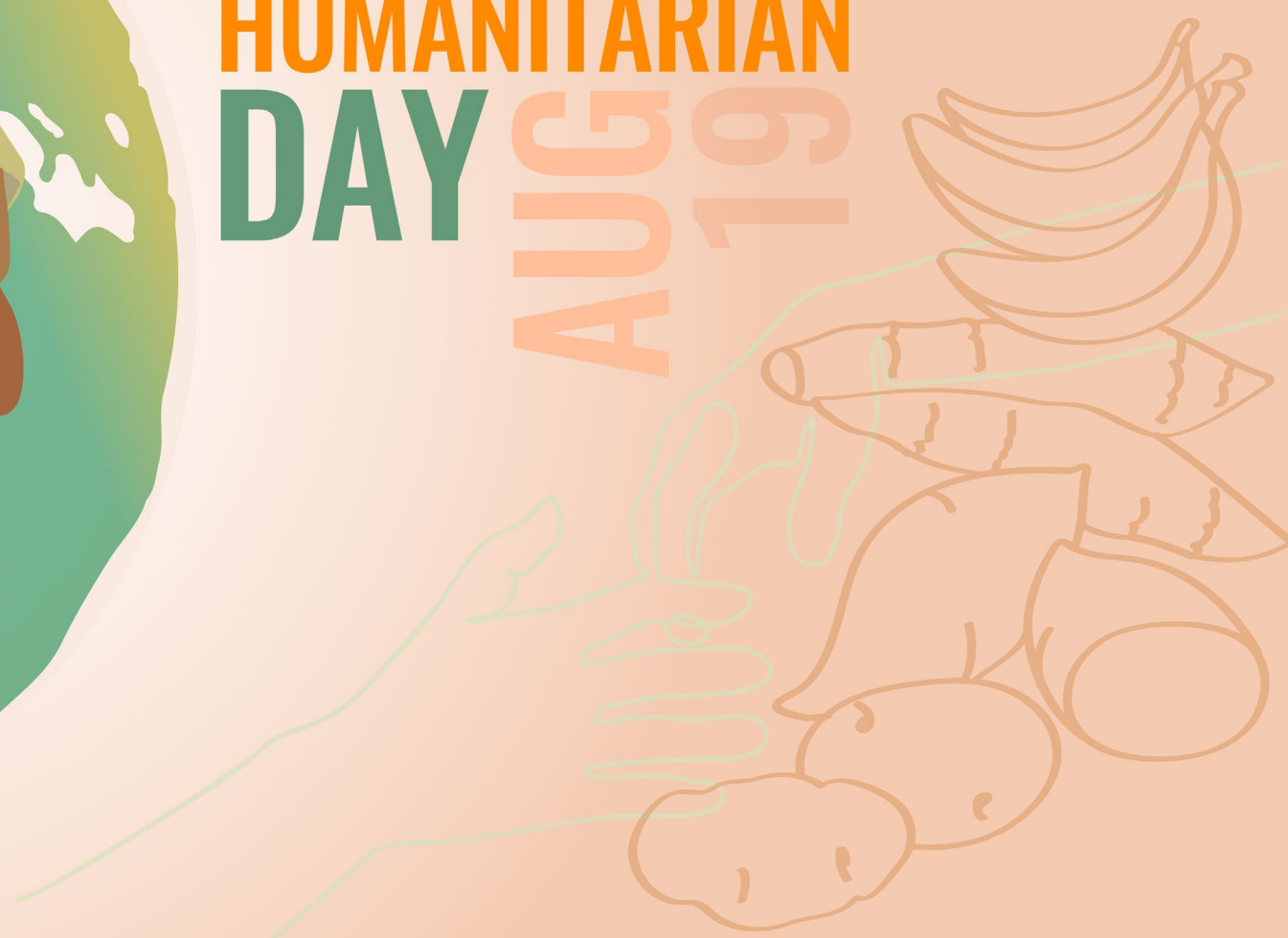
- On-line survey for “virtual engagement” countries:
Bangladesh, Ethiopia, Haiti, Madagascar, Mozambique
- World Humanitarian Day
- Haiti Sweet Potato Seed System Assessment

Subject	Bangladesh	Haiti	Ethiopia	Madagascar	Mozambique
Number of individual responses (organizations)	5 (1)	2 (2)	10 (10)	6 (3)	1 (1)
Type of disaster	Drought /flood Plant disease Poverty	Drought /flood Plant disease Political instability Poverty Food insecurity	Drought /flood Plant disease Political instability Poverty Conflicts/war Human diseases (e.g., Ebola, COVID-19)	Drought /flood Plant disease Political instability Poverty Human diseases (e.g., Ebola, COVID-19)	Drought /flood Plant disease Poverty Conflicts/war
Top target geographic areas	Rajshahi and Rangpur Coastal and hilly areas Haor areas	Ouest Sud Centre Nippes Artibonite	Gambelia Oromia Amhara Southern Nations, Nationalities and Peoples' Tigray	Tulear Fianarantsoa Toamasina Vangaindrano Farafangana Vondrozo	Zambezia Sofala Nampula
Top staple preferences foods for target beneficiaries	Rice Potato Fruits Rangpur Kaharole Dinajpur	Leguminous Cereals Roots and tubers	RTB crops Cereals Legume Pulse Teff	Cereal RTBs Legumes	Maize Pigeon Pea Cassava

Subject	Bangladesh	Haiti	Ethiopia	Madagascar	Mozambique
Type of beneficiaries	Vulnerable farmers Refugees Internally Displaced Population Local NGOs	Vulnerable farmers Internally Displaced Population Local NGOs	Vulnerable farmers Migrants Refugees Internally Displaced Population Local NGOs	Vulnerable farmers Migrants Internally Displaced Population Local NGOs	Vulnerable farmers
List the RTB crops that your organization has worked with	Cassava Banana Potato	Cassava Banana Yam	False Banana Potato Sweetpotato Desert banana and plantain Cassava	Cassava Sweetpotato Banana and plantain potato	Cassava Sweetpotato
How effective is the implementation of RTB crop interventions	Moderately effective	NA	Moderately effective for banana, cassava, and yam Completely effective and highly effective for potato and sweet potato	Not very effective for potato Moderately effective for banana, cassava, and yam Completely effective for sweet potato	NA
Interested in support to strengthen capacities for the design and implementation of RTB interventions	Yes	Yes	Yes	Yes	Yes



**WORLD
HUMANITARIAN
DAY** **AUG 19**



Blogs describing CIP's contributions in humanitarian interventions

- [Uganda: Refugee, host communities find relief and stability in Orange-fleshed Sweetpotato - International Potato Center](#)
- [Reaching humanitarian and neglected places with the nutritious and resilient sweetpotato: The case of the Cyclone Idai in Manica and Sofala Provinces, Mozambique](#)
- [Madagascar: Anti-malnutrition initiative targeting drought-affected populations exceeds expectations in 18 months](#)
- [Relief group travels hundreds of kilometers to feed school children in Cameroon, braving roadblocks to grow orange-fleshed sweetpotato in conflict-affected areas](#)
- [Haiti: Improving the sweetpotato seed system in a challenging humanitarian environment - International Potato Center \(cipotato.org\)](#)
- [Discovering hope: Potato and sweetpotato technology transforming lives in drought and conflict-affected Ethiopia](#)

Haiti Sweetpotato Seed System Assessment: A Multi Stakeholders Approach

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CHIBAS, Université Quisqueya, Haiti



CIP, International Potato Center, Peru

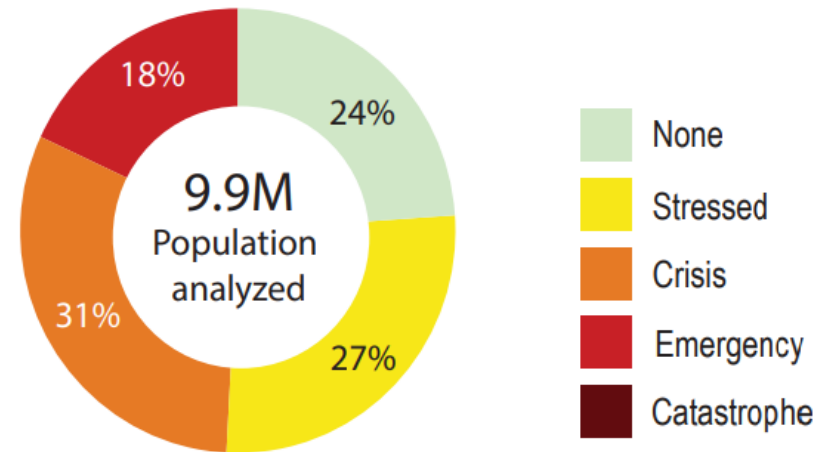


Country facts

- poorest country in the Latin America and the Caribbean (LAC) region and among the poorest countries in the world
- According to the World Bank, nearly 90 per cent of Haitians live below the poverty line, with nearly a third of them living in extreme poverty (US\$2.15/day).
- 22% of children are at risk of stunting



49% of the analyzed population is in IPC Phase 3 or above.



Level of Food Insecurity in Haiti (Integrated Food Security Phase Classification (IPC), 2023)

Sources:

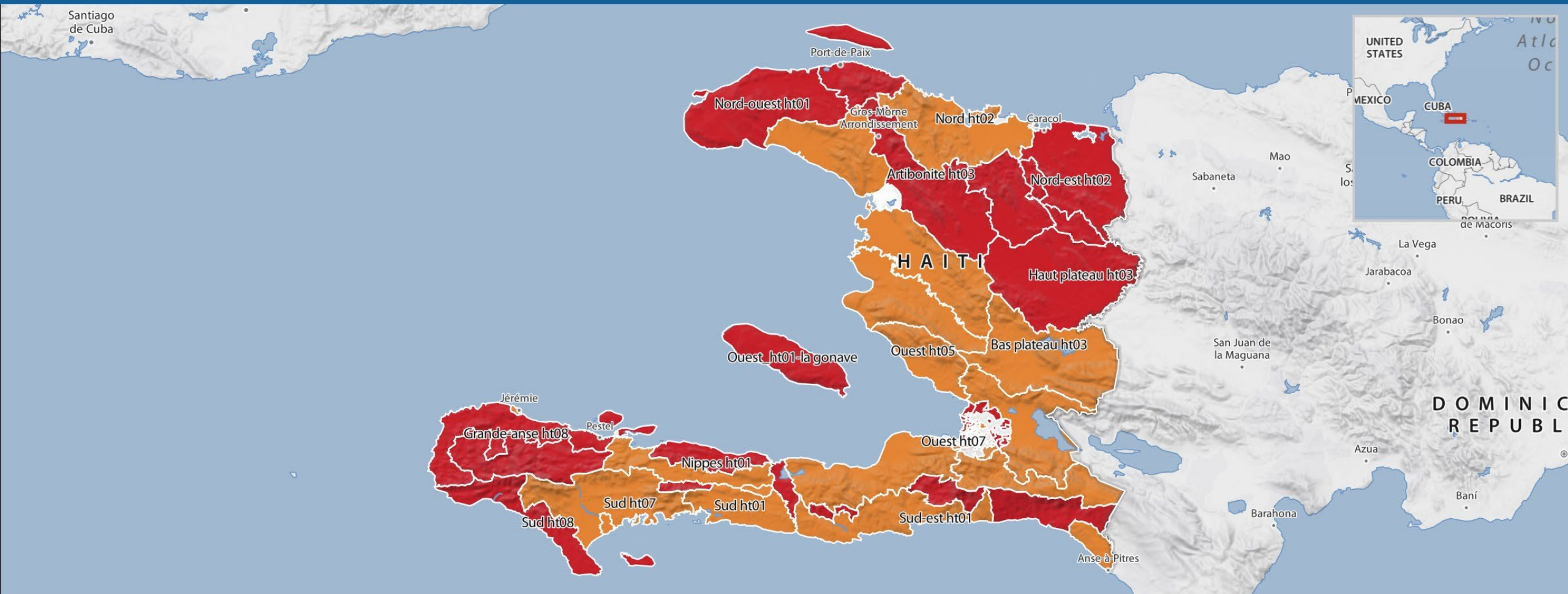
- UN Office for the Coordination of Humanitarian Affairs (OCHA) Haiti: Humanitarian Response Plan 2023 At a Glance (April 2023) <https://reliefweb.int/attachments/bfb30359-94b6-4cdc-85af-4fea65da9699/Haiti%202023%20HRP%20At%20a%20glance%20English.pdf>
- World Bank. HUMAN Capital Index 2022. <https://datacatalog.worldbank.org/search/dataset/0038030/Human-Capital-Index>
- <https://www.ipcinfo.org/ipc-country-analysis/details-map/en/c/1156263/?iso3=HTI>

Acute Food insecurity projection 2023

Haiti

Acute Food Insecurity March 2023 (Proj. Update)

Projected: Mar 2023 - Jun 2023



Source: <https://www.ipcinfo.org/ipc-country-analysis/details-map/en/c/1156263/?iso3=HTI>

Geography and Agriculture

- tropical climate (humid – semiarid)
- primarily mountainous (>2400 m asl) -> only 1/3 of land is suitable for cropping
- Main staple foods: **rice, maize**, wheat flour, **sorghum**, pulses, tubers (yams, cassava, **sweetpotato**), and plantains
- >60% of people depend on agriculture
- >1 Mio farms cultivating an average <1 ha

- **Constraints:** limited and low quality of inputs, pests and diseases, soil degradation, and unimproved cropping practices, postharvest losses



Image: Kendra Helmer, USAID

Haiti: extreme challenging humanitarian environment

The journey of research for development in Haiti is marked by critical challenges.

- Natural Disasters: >96% of the population is exposed to hurricanes, floods, droughts, earthquakes, and epidemics
- Gang violence, assassination of the president
- Crime, and kidnapping (3 kidnappings/day; 16,470 incidents of gender-based violence)
- at least 3,960 people have been killed, 1,432 injured and 2,951 kidnapped in gang-related violence this year alone)
- 62% of internally displaced people

Source: Office of the High Commissioner for Human Rights, 2023; UNICEF, 2023, Sin

Table 5. Occurrence of natural disasters in the period 2000–2016

Type of disaster	Number of events	Total number of fatalities	Total number of affected persons
Drought	3	0	4,635,000
Earthquake	1	222,570	3,700,000
Epidemic	7	7,168	585,453
Flood	37	3,106	647,721
Storm	26	4,332	3,120,284
Total	74	237,176	12,688,458

Note: Epidemic events refer to outbreaks of bacterial and viral diseases; floods include coastal, flash, riverine, or other floods; and storms include convective, extra-tropical, tropical cyclone, and other storms.

Sweetpotato in Haiti



Cake, bread, chips and street food made of sweetpotato roots in Les Cayes, Haiti



Sweetpotato can be found in local markets and the roots are consumed boiled, fried and as bread. Their leaves are used as animal feed.

Food festival promoting sweetpotato products and dishes (Photos: Benedique Paul, 2022)

Strengthening sweetpotato breeding in Haiti

- This requires the availability of clean seeds including pest and disease control.
- CIP provided botanical seeds and technical backstopping that allowed for Quisqueya University to establish its own breeding program.
- CIP provides training on in vitro culture and clonal reproduction, controlled crosses, pest and diseases assessment, and other technical expertise needed for the success of the program.



Seed system assessment



The screenshot shows the 'TOOLBOX' website. The logo at the top left features a green plant growing from a brown box, with the text 'TOOLBOX' in orange and 'FOR WORKING WITH ROOT, TUBER AND BANANA SEED SYSTEMS' in smaller black text below it. The navigation menu includes 'HOME', 'ABOUT US', 'KEY CONCEPTS', 'TOOLS', 'RESULTS', 'EVENTS', 'CONTACT', and a search icon. The main heading is 'MULTI-STAKEHOLDER FRAMEWORK FOR INTERVENING IN ROOT, TUBER AND BANANA SEED SYSTEMS'. Below this is a red circular icon with a white geometric design inside, representing the multi-stakeholder framework. The text 'Multi-stakeholder framework' is written below the icon. To the right, the 'OVERVIEW' section contains a paragraph of text.

TOOLBOX
FOR WORKING WITH
ROOT, TUBER AND
BANANA SEED SYSTEMS

HOME ABOUT US KEY CONCEPTS TOOLS RESULTS EVENTS CONTACT 

MULTI-STAKEHOLDER FRAMEWORK FOR INTERVENING IN ROOT, TUBER AND BANANA SEED SYSTEMS



**Multi-stakeholder
framework**

OVERVIEW

The multi-stakeholder framework gives researchers, policy makers, and practitioners a quick overview of root, tuber and banana seed systems. The framework is a table, with rows of stakeholders (such as seed producers, seed traders, and extensionists) and columns of seed system functions (availability of seed, access, and quality). It is best applied during workshops and field visits as a first step towards understanding a seed system, to plan a project. The framework can also be used to monitor or evaluate an intervention. The framework usually needs to be complemented with more in-depth studies using other tools.

<https://tools4seedsystems.org/tools/multi-stakeholder-framework/>

Interviews

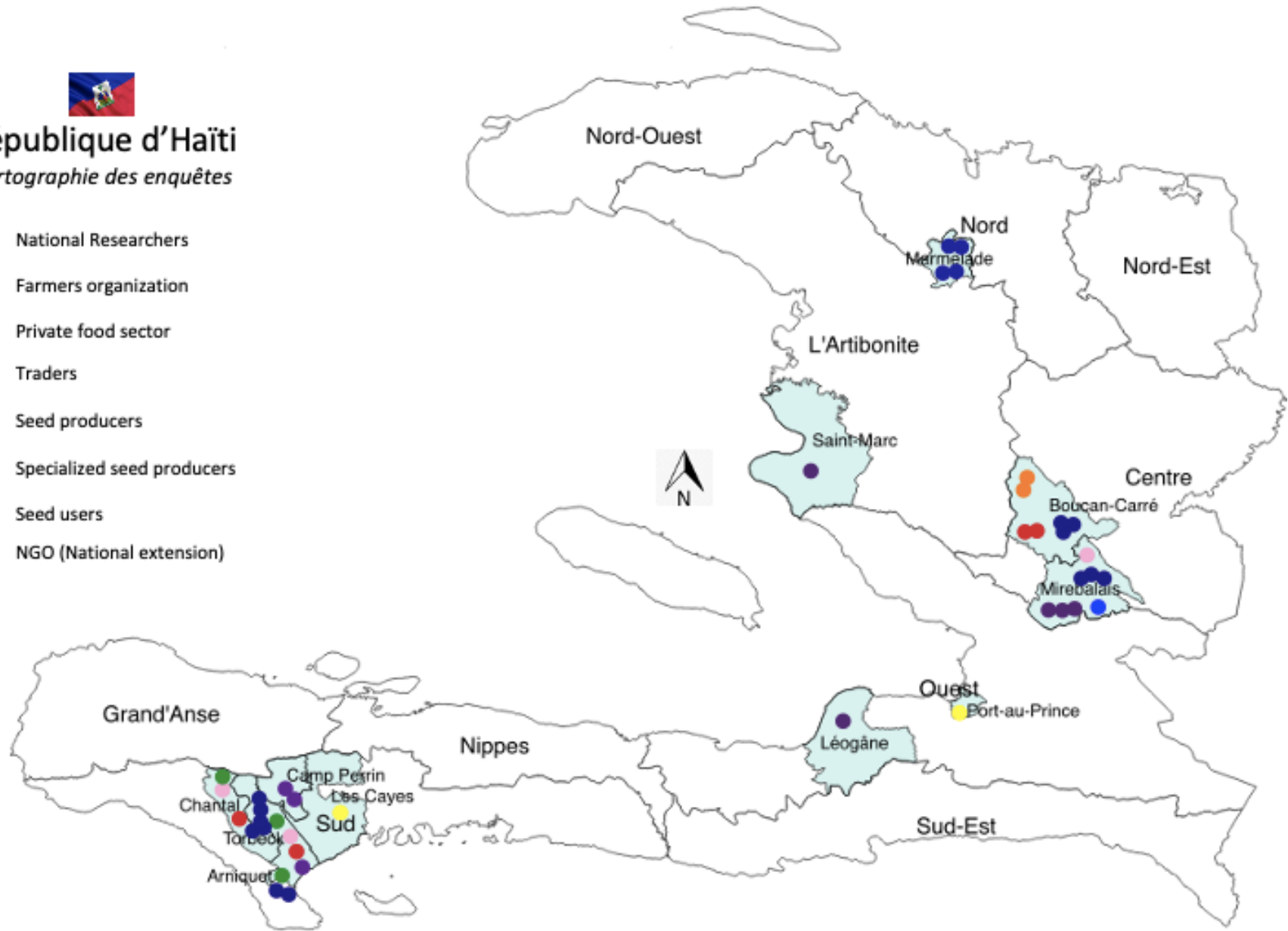


République d'Haïti

Cartographie des enquêtes

Stakeholders

- National Researchers
- Farmers organization
- Private food sector
- Traders
- Seed producers
- Specialized seed producers
- Seed users
- NGO (National extension)



Main results

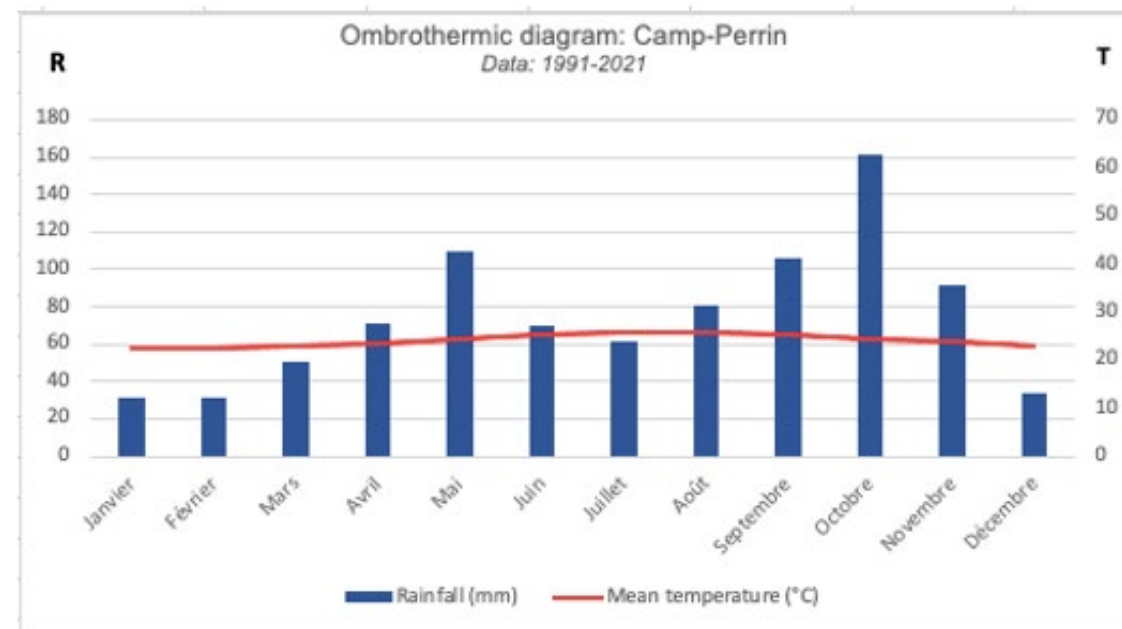
- Ties between stakeholders are limited, with the closest relations existing between farmers who exchange seeds informally.
- The seed system operates under traditional settings, with varieties named, reproduced, and circulated based on farmers' institutional arrangements, lacking regulation from the public sector.
- Only one research structure and few specialized seed producers were identified in the regions surveyed



Specialized production of sweetpotato planting material (vines) in Boucan-Carré, Haiti (Photo CHIBAS, May 2022).

Main results

- Seed producers plant sweetpotato one month before the main planting season (October to January) to harvest and sell vines to farmers, but most farmers obtain vines from their plots or from neighbours and relatives.
- The most cultivated varieties are: *Ti savyen*, *Grenn mouton*, *Tifi pi dous*, and *Ouvè lekó*.
- The names are mostly local (in Haitian creole) and gender related (reflecting stereotypes).
- In some locations, such as Arniquet, Chantal, Camp-Perrin and Mirebalais, between 9 and 13 different varieties were reported.
- From one location to another, the same variety can have different names. For example, *Ti kawót* is also named as *Ti esken*. In both cases, the names reflect the elongated shape of the sweetpotato roots.



Main results

- Weevils (*Cylas formicarius*) were identified as the main quality problem due to the damage they cause to the storage roots which makes them unsuitable for consumption
- Other quality problems include viruses, which are ubiquitous in sweetpotatoes globally and controlled through healthy seed and resistance.
- The project will determine the exact viral species affecting sweetpotato in Haiti to enable their monitoring in seed systems and selection of resistance.



Sweetpotato root with severe weevil damage (Photo: CHIBAS, May 2022).

Next steps

Information from the seed system assessment is being used to design activities for:

- Recovering local varieties
- Identifying producers, areas and seasons for seed production
- Explaining seeds circulation between seasons and ecosystems
- Identifying biotic constraints to guide breeding activities
- Trait preferences for sweetpotato varieties

Training course in Lima: Sept-Oct 2023



Visit of inter-season plot of sweetpotato vines production in Limonade, Haiti (Photo CHIBAS, August 2023).

Acknowledgements

*The project is in collaboration with Quisqueya University, which is funded by The Agricultural and Agroforestry Technological Innovation Programme (**PITAG**) which receives support from IFAD, the Inter-American Development Bank and the Global Agriculture and Food Security Program. This is handled (and co-financed) through the [MINISTÈRE DE L'AGRICULTURE, DES RESSOURCES NATURELLES ET DU DÉVELOPPEMENT RURAL \(MARNDR\)](#).*



**TOOL
BOX** FOR WORKING WITH
ROOT, TUBER AND
BANANA SEED SYSTEMS

Thanks!

