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NEWSLETTER

IN THIS ISSUE

EDITORIAL

Dear friends,

The June 2026 edition of this publication highlights the following conviction: the sustainable protection of our agricultural systems hinges on anticipation, collaboration, and the sharing of knowledge.

Read on to find out how stakeholders in the cassava sector have been mobilised through several major initiatives aimed at strengthening phytosanitary surveillance, improving response capacities to viral diseases, and promoting more resilient agricultural practices. These efforts demonstrate the collective commitment of researchers, policymakers, producers, and technical partners to ensuring food security in Africa.

The results of the BIORISK project emphasise the importance of a science-based approach, innovation, and regional cooperation in addressing current and future phytosanitary challenges.

WAVE is proud of all these achievements. However, we cannot release this edition without acknowledging the significant impact of Dr. Katherine Mary Kahn, an unwavering supporter of WAVE since its inception, on the enhancement of plant health and the resilience of agricultural systems in Africa.

Happy reading!

The WAVE Team

AGRIBUSINESS ENTREPRENEURS' DAY FOR THE CASSAVA VALUE CHAIN IN CÔTE D'IVOIRE: AN ESSENTIAL PLATFORM FOR DIALOGUE

On 26 May 2026, Dabou hosted a meeting for cassava sector agro-entrepreneurs in Côte d'Ivoire. Nearly 150 people involved in the cassava value chain attended the meeting, including producers, processors, traders, extension agents, researchers, and Ministry of Agriculture technical service representatives (ME-MINADER-PV).

With the aim of strengthening the capacities of those in the sector, the main objectives of the day were to promote good agricultural practices, raise awareness of the main cassava diseases, and encourage dialogue between stakeholders to identify sustainable solutions to the sector's challenges.

Cassava plays a key role in the rural economy and food security in Côte d'Ivoire. However, the sector faces several challenges, including the spread of viral diseases, the use of uncertified plant material and a lack of coordination between stakeholders. Against this backdrop, the day was organised to provide a platform for dialogue, knowledge sharing and the dissemination of scientific information to professionals in the sector.

The opening ceremony featured interventions from several notable figures, including representatives from the Regional Council of the Grands Ponts, the Cassava Interprofessional Organisation (OIA), administrative authorities and Professor Kouassi Kan Modeste, the WAVE programme representative.

During the day, participants were made aware of the threats posed by cassava viral diseases, including the African Cassava Mosaic Virus (ACMV) and the East African Cassava Mosaic Virus (EACMV). The experts presented the results of research studies carried out to improve the prevention and control of these diseases, which pose a significant risk to farm productivity.

According to Professor Kouassi Kan Modeste, strengthening the capabilities of producers is essential for preserving national cassava production.

'It is essential to strengthen the capacity of our producers to recognise diseases, adopt good cultural practices, and use healthy plant material in order to maintain the productivity of the sector. It is important to know how to identify healthy plants in order to take quality cuttings for new plantings,', he stated.

The technical sessions included the visual identification of cassava viral diseases and the use of the PlantVillage Nuru app for disease diagnosis, as well as good crop health management practices. The various presentations provided participants with a better understanding of methods for preventing and controlling diseases that affect yields.

The meeting also included participatory workshops, which brought together producers, processors and traders in focus groups. These workshops enabled the main difficulties encountered at each level of the value chain to be identified and ways of improvement to be proposed.

Recommendations include improving the quality of plant material, strengthening the technical supervision of producers and establishing quality and packaging labels to enable cassava products to meet international standards and become more competitive in the marketplace.

The regional authorities reaffirmed their commitment to supporting initiatives that strengthen the resilience of the sector and preserve the Grands-Ponts region's reputation for producing high-quality cassava-based products, particularly attiéké.

This initiative forms part of the **BIORISKS project**, which is funded by the **European Union**, coordinated by **CORAF** and implemented by **WAVE**. Implemented over a **five-year period**, the project has helped farmers in West and Central Africa **to anticipate and manage biological risks that undermine efforts to increase agricultural productivity.**

At the end of the meeting, participants agreed to continue collaborating across the value chain to promote healthier, more productive and sustainable cassava production, thereby contributing to food security and economic development in Côte d'Ivoire.

WORKSHOP TO REVISE THE NATIONAL RESPONSE PLAN (NRP) AGAINST CASSAVA VIRAL DISEASES

In response to evolving phytosanitary threats to cassava cultivation, Côte d'Ivoire has taken a new step towards strengthening its system for preventing and managing agricultural health crises. On **27 and 28 May 2026**, researchers, experts, representatives of public institutions, producer organisations, and technical partners gathered in Grand-Bassam for a workshop to review the **National Response Plan (NRP) for cassava viral diseases.**

This meeting, organised as part of the **BIORISKS project**, aimed to update the national surveillance, alert and response mechanisms for viral diseases that threaten cassava production. Cassava is a strategic crop for the food security and incomes of millions of Ivorian producers.

A context marked by new phytosanitary challenges

For several years, countries in West and Central Africa have been preparing for the possible introduction of cassava brown streak disease (CBSD), one of the crop's most destructive viral diseases. By 2018, ten countries in the region had developed national response plans to anticipate and coordinate responses in the event of an outbreak of this disease.

In Côte d'Ivoire, simulation exercises conducted in several departments in 2023 made it possible to assess the effectiveness of the existing system and identify areas for improvement.

More recently still, research carried out by the WAVE Regional Centre of Excellence revealed the presence of the Ugandan strain of the African cassava mosaic virus **(EACMV-Ug)** in Côte d'Ivoire for the first time. This strain is capable of causing yield losses estimated at between **70 and 90%.**

Update crisis prevention and management mechanisms.

Over the course of two days, participants analysed the strengths and limitations of the current system, proposing improvements adapted to local circumstances.

The work focused in particular on:

- monitoring and early warning mechanisms;
- diagnostic and laboratory confirmation procedures;
- outbreak management and quarantine protocols;
- communication strategies in crisis situations;
- clarifying the roles and responsibilities of the various institutions involved;
- Monitoring and evaluating the implementation of the plan.

According to the organisers, the aim is to ensure that each stakeholder knows precisely how to react when a phytosanitary alert is triggered.

'When there is an alert, you have to know who is intervening and how it works. The response plan makes it possible to organise the responsibilities of each stakeholder so that actions can be triggered quickly and effectively', said **Mrs Aman Koko,** representative of **Ministry of Agriculture.**

A participatory approach to a coordinated response

The workshop adopted a collaborative approach, involving research institutions, phytosanitary authorities, quarantine services, universities, diagnostic laboratories, producer organisations, and stakeholders in the seed sector.
Working in thematic groups, the participants formulated technical and operational recommendations to strengthen the effectiveness of the national response plan. These proposals were then discussed in a plenary session to reach a consensus on the final version of the document.

For the producers present, this mobilisation must be long-term. In particular, they called for increased resources for scientific research to continue monitoring and protecting crops.

Towards better protection of the cassava sector

At the end of the workshop, several deliverables were produced, including a revised version of the National Response Plan, a summary report of the work, and a roadmap to support its implementation.

Beyond the national framework, this initiative also contributes to strengthening regional cooperation on pest risk management. Harmonising surveillance and response strategies between Central and West African countries is essential to limiting the spread of cassava viral diseases.

By consolidating its capacities for the early detection, diagnosis and intervention of these diseases, Côte d'Ivoire is demonstrating its commitment to the sustainable protection of a crop that is essential to its agriculture and to the food security of its population.

CLOSING OF THE FIVE-YEAR BIORISKS PROJECT

After five years of implementation, the **BIORISKS project** officially came to a close at a regional closing workshop held in Abidjan. The meeting brought together key project stakeholders, including representatives from the ten beneficiary countries, as well as technical and financial partners, researchers, and implementing institutions.

Coordinated by **CORAF** and funded by the **European Union**, the project was implemented with the support of the **WAVE Regional Centre of Excellence** in the following ten countries in West and Central Africa: **Benin, Burkina Faso, Cameroon, Côte d'Ivoire, Gabon, Ghana, Nigeria, the Democratic Republic of the Congo, Sierra Leone and Togo.**

In the face of increased trade and the circulation of pests, as well as the effects of climate change, the BIORISKS project aimed to strengthen regional capacities in order to anticipate, monitor and manage the biological risks that threaten strategic food crops.

A regional response to threats that know no borders

According to **Professor Justin Pita, Executive Director of the WAVE Regional Centre of Excellence**, one of the main lessons of the project is the need for a regional approach to transboundary plant diseases.

According to him, pests and diseases do not recognise administrative borders. Therefore, the fight against these threats can only be effective if countries harmonise their actions, share information, and coordinate their response mechanisms.

This vision has been translated into concrete action through the development of national response plans in the ten participating countries, providing the authorities with clear protocols for swiftly detecting and containing any new disease incursions.

Professor Pita also recalled that plant health is now a key pillar of the **One Health concept**. Alongside human, animal and environmental health, crop health poses a significant challenge to the food and economic security of populations. Healthy plants are essential for sustainable agricultural production and improved food security.

Concrete results for producers

By the end of the project, the awareness-raising activities, demonstration plots and simulation exercises had directly reached over **3,239 agricultural stakeholders.** Of these, **37% were women.**

The project also provided training in the use of the **PlantVillage Nuru digital app** to **1,460 people**, **51% of whom were women** and **27% of whom were young people**. In order to support the deployment of this innovative tool, 260 smartphones were distributed in Cameroon, Gabon, the Democratic Republic of Congo and Sierra Leone.

Nineteen demonstration plots were established to promote good agricultural practices and improve producers' ability to recognise crop diseases early on.

These actions have contributed to improving the incomes of small-scale producers in the six participating countries, as well as creating **1,131 jobs**, **29%** of which were held by women and **34%** by young people.

During the closing workshop, **Emmanuel Njukwe, Director of Research and Innovation at CORAF**, emphasised that BIO-RISKS had facilitated the use of innovative tools to improve the early detection and management of plant diseases.

Initially designed for cassava, these tools have gradually been adapted for use with other important crops, such as plantain and maize. These technologies enable growers and technical services to identify diseases faster, share warnings and strengthen prevention measures at the regional level.

The project also promoted the creation of national databases for collecting, processing and sharing phyto-sanitary information between participating countries.

Investing in science to ensure sustainability

In addition to tools and infrastructure, BIORISKS invested heavily in human capital to ensure the sustainability of these gains.

Thirteen doctoral students were recruited and trained in the fields of virology and sociology, **38%** of whom were women. To date, **six theses** have been completed and **twelve scientific articles have been published.**

For **Emmanuel Njukwe**, this new generation of researchers is one of the project's most significant legacies. Strengthening local scientific capacity will enable countries to continue their efforts and ensure the continuity of biorisk monitoring and management systems well beyond the project's duration.

WAVE's laboratory capacities have also been strengthened through the acquisition of modern diagnostic equipment and kits, improving the detection and characterisation of emerging diseases.

Strengthening policy dialogue for better phytosanitary governance

The project also prioritised political dialogue and regional cooperation.
Several high-level workshops were held, bringing together **ministers of agriculture**, r**epresentatives of ECOWAS, CORAF and the WAVE Regional Centre of Excellence**, as well as regional hubs and technical and financial partners. These meetings promoted the exchange of experiences and scientific results, and the formulation of recommendations aimed at strengthening phytosanitary surveillance and healthy seed management policies.

This has enabled the harmonisation of sampling and diagnostic protocols, and the consolidation of regional preparedness and response mechanisms to phytosanitary threats.

Family photo – Political Dialogue

Round-table discussion – Political dialogue

A lasting legacy for regional food security

BIORISKS has left behind much more than numerical results. It contributed to the development of a more efficient regional surveillance network, the strengthening of scientific and technical skills, the promotion of innovative digital tools, and the improvement of coordination between countries in the face of biological threats.

As the challenges posed by climate change and the emergence of new pests intensify, the BIORISKS project's achievements now provide a solid foundation for the sustainable protection of agricultural systems in West and Central Africa.

The experience gained over the past five years shows that a regional response based on science, innovation and cooperation remains one of the best ways to preserve plant health, strengthen food security and support the livelihoods of millions of producers.

A TRIBUTE TO DR. KATHERINE (KATHY) MARY KAHN

A life woven with grace, integrity, and self-sacrificing love.

Some people go through this world as catalysts - rare visionaries who acts as human bridges - master connectors and door-openers who leverage their influence to scale impact and transform lives. Katherine Mary Kahn was one of them.

Those who had the privilege of knowing her — whether in laboratory corridors, conference rooms Seattle or villages where her decisions translated into improved livelihoods, all encountered the same woman. **No mask. No pretence. Just Kathy: whole, genuine and deeply present.**

She inherited this spirit from her legendary ancestor, Lady Katherine Cook: a medical missionary who established maternal healthcare in the heart of Uganda at a time when few dared to do so. Kathy did not carry this legacy as a burden, but as a calling. To her, Africa was not a project to be managed — it was a land to be loved, a people to be honoured, and farmers to be treated with dignity and fairness.

Her distinguished career took her through Norwich, St. Louis and Washington, D.C., finally settling in Seattle. For seventeen years at the Bill & Melinda Gates Foundation, **she shaped global agricultural policy with absolute integrity as her guiding principle.**

She categorically rejected the idea that African nations are less deserving than others. She emphasised the importance of science serving local realities, smallholder farmers and the people the world often neglects. The Gates Foundation's CEO himself praised her unique ability to reconcile the urgency of immediate aid with the importance of building local capacity.

But it is not merely the list of her achievements that fills the hearts of all those who knew her. Rather, it is the unanimous voices of the researchers she quietly guided, the scientists she fervently backed despite their limited resources, and the colleagues who became her family. Many people were unaware of the extent of her influence because Kathy did not seek the limelight. She built so that others might rise.

To WAVE, she was not just a working partner. She was a friend and a sister. She was one of those rare presences that give meaning to the word '*community'.*

She continued to bless others right until the end. Selflessly. Wholeheartedly.

The world has lost an exceptional voice. We have lost someone irreplaceable. But the bridges she built will stand for a long time to come. They will stand for a long time to come.

'The same person everywhere — with her family, her friends, her church, her work.' Perhaps the finest thing one can say about a human being is that they are the same person everywhere.

May her memory sustain you and her example continue to guide you.

agriculture

Facteur d'impact : 3.5

MDPI

Enhancing Farmers' Capacity for Sustainable Management of Cassava Mosaic Disease in Côte d'Ivoire

Ettien Antoine Adjéi [1,2,*], Kassoum Traoré [1,3], Eveline M. F. W. Sawadogo-Compaore [4], Bekanvié S. M. Kouakou [2], John Steven S. Séka [2], Dèwanou Kant David Ahoya [5], Kan Modeste Kouassi [2], Nazaire K. Kouassi [2] and Justin Simon Pita [2,*]

[1]UFR Sciences Sociales, Département de Sociologie, Université Peleforo GON COULIBALY, Korhogo BP 1328, Côte d'Ivoire

[2]Regional Center of Excellence for Transboundary Plant Pathogens, Central and West African Virus Epidemiology (WAVE), Pôle Scientifique et D'innovation, Université Félix Houphouët-Boigny (UFHB), Abidjan 22 BP 582, Côte d'Ivoire

[3]Centre Ivoirien de Recherches Economiques et Sociales (CIRES), Abidjan 08 08 BP 1295, Côte d'Ivoire

[4]Institut de l'Environnement et de Recherches Agricoles (INERA), Ouagadougou 04 04 BP 8645, Burkina Faso

[5]Laboratory for Analysis and Research on Economic and Social Dynamics (LARDES), University of Parakou (UP), Parakou P.O. Box 123, Benin

*Authors to whom correspondence should be addressed.

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ABSTRACT

Cassava Mosaic Disease (CMD) is a major constraint to cassava production in Côte d'Ivoire, causing significant yield and income losses for smallholder farmers. Despite its high prevalence, farmers' knowledge and understanding of the disease remain limited. To address this issue, the Central and West African Virus Epidemiology (WAVE) Regional Center of Excellence provided capacity building for farmers in the major cassava growing regions. This study assesses the impact of the WAVE's trainings and awareness campaigns on farmers' knowledge of the disease and the management methods they adopted. Mixed socio-agronomic data were collected from 290 farmers, and CMD epidemiological parameters were assessed in 82 farms. Data were analysed using propensity score matching (PSM), followed by a Tobit regression model to assess the determinants and intensity of adoption of CMD management practices, using Stata. The results showed that trained farmers had a better understanding of CMD compared to untrained farmers. On average, trained farmers adopted 2.36 disease management practices (DMPs) compared to 1.55 DMPs for untrained farmers. Participation in WAVE's training sessions and a sound knowledge of CMD positively influenced both the adoption and intensity of adoption of DMPs. However, there was no significant difference in CMD incidence between beneficiary areas (54.55%) and non-beneficiary areas (54.95%), likely due to the unavailability of disease-free planting material, inadequate agricultural practices, and high populations of whiteflies *(Bemisia tabaci)*. This study shows the importance of awareness campaigns in the sustainable management of crop diseases in general and CMD in particular and suggests the need to train farmers on disease management and provide them with healthy planting materials.

WAVE CONTRIBUTES TO BIOINFORMATICS CAPACITY BUILDING AT THE AFRICA FORWARD MEETING 2026

During the **Africa Forward Meeting 2026 in Nairobi**, **Professor Fidèle Tiendrébéogo**, the **WAVE Regional Centre of Excellence** representative, participated in an event dedicated to scientific capacity building. This event focused on developing a high-level digital training programme. During the event, he co-moderated a presentation on the I**nternational Certificate in Bioinformatics and Genomics (CIBiG)**. This initiative aims to strengthen the bioinformatics, genomics, and high-performance computing skills of young Africans. The discussions emphasised the importance of strategic partnerships and regional expertise development to support health research and innovation through a One Health approach.

WAVE REAFFIRMS ITS COMMITMENT TO FOOD SECURITY ALONGSIDE NIGERIA

A WAVE delegation, led by **Professor Angela Eni**, met with the Nigerian Minister of State for Agriculture and Food Security. The meeting provided an opportunity to discuss the challenges posed by emerging and existing diseases affecting agricultural productivity and food systems in Nigeria. WAVE reiterated its commitment to supporting national efforts by making the expertise of its laboratories and activities dedicated to plant health available, thus contributing to the strengthening of food security.

WAVE PARTICIPATES IN THE CELEBRATION OF THE INTERNATIONAL DAY OF PLANT HEALTH IN NIGERIA

To mark the **International Day of Plant Health** on **12 May 2026**, WAVE joined the official events organised by the **Nigeria Agricultural Quarantine Service (NAQS)** in Nigeria. Represented by **Professor Angela Eni**, the Centre participated in technical exchanges aimed at strengthening collaboration between plant health stakeholders. This participation is a testament to WAVE's ongoing commitment to sustainable crop protection and to strengthening institutional partnerships.

SIERRA LEONE STRENGTHENS PREPAREDNESS FOR CASSAVA VIRAL DISEASES

In **Sierra Leone, the Crop Protection Unit at the University of Njala** organised an awareness and demonstration day dedicated to managing cassava viral diseases, with the support of **WAVE Sierra Leone.** This initiative brought together researchers, policymakers, farmers, and value chain actors to promote a collaborative approach to the growing risks associated with cassava brown streak disease (CBSD) and cassava mosaic disease. This activity is part of efforts to strengthen the resilience of agricultural systems and protect crops sustainably.