

# **International Symposium on Plant Protection in Africa**

**Ouagadougou, Burkina Faso**

**November 30 to December 4, 2021**

**Ouaga 2000 Conference Hall & Virtual University of Burkina  
Faso**

## **Call for Abstracts**

### **Theme**

**Plant protection in Africa in a  
context of climate change: challenges  
and perspectives**

**Date limite de soumission /**

**Deadline for submission:**

**17 Octobre 2021 / October 17, 2021**

## Context

The proliferation of plant pests, particularly pests and diseases of plants, poses a serious threat to food security. Indeed, the Food and Agriculture Organization of the United Nations (FAO) estimates that pests and diseases can destroy up to 40% of food crops each year, depriving millions of people of food and causing serious harm to agriculture. Researchers (Savary et al., 2019) recently reported overall yield losses associated with diseases and variable insect pests on major crops such as sweet potato (17.28%), soybean (21.4%), wheat (21.5%), corn (22.5%) and rice (30%). According to these researchers, the highest yield losses have been recorded in regions experiencing a deficit in food production, a galloping increase in population and the emergence or re-emergence of pests and diseases. This observation depicts the situation of most developing countries, the majority of which are located in Africa.

Sub-Saharan Africa (SSA) is arguably the region of the world where the problem of plant protection is most acute. Indeed, alongside the native species of pests and diseases (pathogens responsible for diseases, arthropod pests, nematodes, etc.), the African continent is the victim of the invasion of several exotic species that are often more devastating than the native species. The most recent examples are fruit flies of which *Bactrocera dorsalis* is the 'worthy' representative, the fall armyworm (*Spodoptera frugiperda*) native to America, the South American tomato leafminer (*Tuta absoluta*), necrosis lethal in maize caused by two phytoviruses originally discovered in the United States, the brown streak of cassava. The invasion of strigas, in particular *Striga hermontica*, *Striga gesnerioides*, originating in the tropics, is also worrying. It is increasingly recognized that the action of these pests and diseases is exacerbated by climate change. Indeed, this climate change can modify the behavior and distribution of pests and diseases with significant negative consequences for agricultural production.

A study by CABI (2017) showed that *Spodoptera frugiperda* has the potential to cause 8.3 to 20.6 million tonnes of loss in the 12 major maize producing countries in Africa. The monetary value of these losses is estimated to be between US \$ 2.48 and 6.19 billion. As for the fruit fly, *Bactrocera dorsalis*, in addition to inflicting significant yield losses on the mango, it threatens to make it impossible to export this fruit from Africa to Europe.

Three species of nematodes (*Meloidogyne arenaria*, *M. javanica* and *M. incognita*) are responsible for significant economic losses on crops such as maize, cowpea, tomato, okra, sweet potato, potato, banana, papaya. Global annual losses due to *Meloidogyne* spp. are estimated at 157 billion US dollars.

The challenges of plant protection in SSA therefore arise in terms of a direct threat to food security in Africa with a galloping birth rate. These issues also affect the economy but also human and animal health and the environment due to the increasing amounts of synthetic pesticides used each year to protect cultivated plants. These issues are in line with some sustainable development objectives, in particular (i) objective 1: eradication of poverty (ii) objective 2: fight against hunger (iii) objective 4: access to quality education (iv) objective 13: fight against climate change and (v) objective 15: life on earth.

If in developed countries, the protection of cultivated plants is satisfactorily achieved according to scientific progress, in SSA, synthetic chemical control remains the main method of

controlling pests and diseases. It is in this context that at the initiative of the developing country committee (COPED) of the Académie des Sciences de France, a mini-forum was organized from December 13 to 14, 2018 in Paris to discuss concrete solutions and the the event of organizing in Africa in 2020 an international conference on plant protection. The Paris mini-forum brought together around 40 people, including 16 invited participants, ie 8 French and 8 participants from West Africa. In addition to the Académie des Sciences de France, the French participants came from IRD, SupAgro, CIRAD and IPS2, Orsay, Academy of Agriculture. On the African side, the institutions represented were INERA of Burkina Faso, AfricaRice (Côte d'Ivoire), the Cheick Anta Diop University of Dakar (Senegal), the University of Sciences and Techniques of Bamako (Mali), the program WAVE based at Félix Houphouët Boigny University in Cocody (Ivory Coast). After two days of work, the participants of the mini-forum decided to organize the 2020 international conference in Ouagadougou in Burkina Faso. The organization of this colloquium was to coincide with the International Year of Plant Protection which is an initiative of the World Bank. Unfortunately, due to the COVID-19 pandemic, the conference was not organized in 2020 but postponed to 2021 and scheduled to be held face to face and / or virtually from November 30 to December 4, 2021.

The conference will be co-organized by the National Academy of Sciences, Arts and Letters (ANSAL-BF) of Burkina Faso, the National Center for Scientific and Technological Research (CNRST) of Burkina Faso, the Committee of Developing Countries (COPED) of the Académie des Sciences de France, the Direction Générale des Productions Végétales (DGPV) of the Ministry of Agriculture, Hydro-agricultural Development and Mechanization (MAAHM) of Burkina Faso and the Permanent Inter-State Committee of Drought Control in the Sahel (CILSS).

The general theme of this conference is: "Plant protection in Africa in a context of climate change: challenges and perspectives".

Ce thème couvre les sous-thèmes suivants :

- State of plant protection research in Africa
- Sustainable innovations in plant protection
- Capacity building of plant protection actors
- Networking of stakeholders in plant protection in sub-Saharan Africa.

## Objectives

The overall objective of the conference is to take stock of the current strategies inherent in plant protection issues in SSA and to design / strengthen improvement mechanisms and actions for the efficient and sustainable management of the main pests and diseases. The specific objectives are as follow:

- Bring together online and / or face-to-face at least 150 scientists and plant protection specialists from North and Sub Saharan Africa;
- Promote exchanges and the development of cooperation between researchers and plant protection professionals in SSA on the one hand, and between researchers from the north and those from the south on plant protection on the other hand;
- Bring together the French-speaking and English-speaking scientific communities in Africa;
- Take stock of plant protection in sub-Saharan Africa;

- Identify future avenues of research in the light of recent scientific progress in plant protection;
- Identify relevant training topics in plant protection for students, engineers, agricultural producers;
- Propose a mechanism for the establishment of an African institution to promote research in plant protection.

## Organization of the conference

The conference will take place online and / or face to face. It will be organized in the form of plenary sessions (4 inaugural conferences and a round table), parallel sessions of scientific workshops, poster exhibition and site visit. For the plenary sessions, four inaugural lectures (one lecture per day over the first four days) are planned, followed by parallel scientific workshop sessions in four different rooms. These workshops bring together the communications that will be organized into sub-themes linked to the general theme of each inaugural conference. The 5th day of the conference will be devoted to a visit to the Regional Center for Environmental Agricultural Research and Kamboinsé Training of INERA, located 15 km north of Ouagadougou. Throughout this event, stands will be set up on the conference site for the exhibition of posters prepared by students and young researchers. English and French will be the main languages of the conference. Simultaneous translation will be available during plenary sessions.

## Participants and method of abstract submission

The expected participants are academicians, researchers, professionals or amateurs of plant protection, students, NGOs, sub-regional cooperation institutions, African academies, technical and financial partners and scientific societies.

Registrations are made **exclusively online** on the conference website: [www.cipva.org](http://www.cipva.org) from **August 19, 2021 at 00:00 a.m. and will close on October 17, 2021 at 11:59 p.m.**

Applicants for oral communications with the option of publication in the journals of the conference organizers, must submit their complete manuscripts at the time of registration for evaluation according to the recommendations to the authors of these scientific journals.

Others must submit an abstract (500 words) of their oral presentation and / or poster for registration. In any case, all the abstracts of the accepted papers will be published in the proceedings of the conference. The abstracts are expected in the themes of the following sessions:

1. State of plant protection research in West Africa
2. State of plant protection research in Central Africa
3. State of plant protection research in East Africa
4. State of plant protection research in southern Africa
5. Recent developments in the invasion of Africa by the fall armyworm
6. Status of fruit flies in Africa: research, control methods and training of stakeholders
7. The brown streak of cassava: state of research in Africa
8. Status of the American tomato leafminer, *Tuta absoluta* in Africa

9. State of training for plant protection professionals in Africa: curricula, duration, costs
10. State of the training of extension workers in plant protection
11. State of training of producers in plant protection in Africa
12. State of innovations in plant protection popularization: costs, efficiency
13. Bringing together research and higher training institutions in plant protection
14. Bringing together training institutions for middle managers in plant protection
15. Bringing together producer organizations working in the field of plant protection

## **Selection and notification process**

Abstracts (in English or French) submitted on time will be evaluated by an international scientific committee. Authors of selected abstracts will be notified by November 15, 2021. Abstracts should not exceed 500 words and should be formatted in Times New Roman, font size 12, single spaced. Each abstract will include the title in bold, the names of the authors in capital letters and their full first names, their affiliations and addresses. The summary, in one paragraph, should present the objectives of the study, materials and methods, results, conclusions and key words (maximum 5).

**Submission deadline set no later than October 17, 2021 at 11:59 p.m.**

*For more information, download the terms of reference from the conference website:*

[www.cipva.org](http://www.cipva.org)

## International scientific committee

**Prof. Antoine SANON** (ANSAL-Burkina Faso, Président),  
**Dr. Paco SEREME** (ANSAL-Burkina Faso)  
**Prof. Philippe SANKARA** (ANSAL-Burkina Faso),  
**Dr. Hamidou TRAORE** (INERA, Burkina Faso)  
**Dr Souleymane NACRO** (INERA, Burkina Faso),  
**Prof. Nicolas BARRO** (ANB-Burkina Faso),  
**Dr. Diakalia SON** (DGPV-Burkina Faso),  
**Dr Paul OUEDRAOGO** (CILSS, Burkina Faso),  
**Dr. Idrissa MAIGA** (CILSS, Niger),  
**Dr. Sylvain OUEDRAOGO** (CILSS, Mali),  
**Prof. Moctar TOURE** (ANSTS, Sénégal),  
**Dr. Abdoul Aziz SY** (ANSTS & ASIBL Toulouse, France),  
**Prof. Adam TOUDOU** (Université Abdou Moumouni DIOFFO, Niamey, Niger),  
**Prof. Olivier GNANKINE** (Université Joseph KI-ZERBO, Burkina Faso),  
**Prof. Irénée SOMDA** (Université Nazi BONI, Burkina Faso),  
**Prof. Isabelle GLITHO** (Prof. honoraire, Université de Lomé, Togo),  
**Prof. Angela Obiageli ENI** (Convenant University, Nigeria),  
**Dr. Joseph NDUNGURU** (Mikocheni Agricultural Research Institute, Tanzanie),  
**Prof. Ken Okwae FENING** (University of Ghana, Accra),  
**Dr Michael OSAE** (Biotechnology and Nuclear Agriculture Research Institute, Ghana),  
**Prof. Michel DELSENY** (Académie des Sciences de France, vice-président du COPED),  
**Dr. Christophe BRUGIDOU** (IRD, Montpellier, France)  
**Dr. Valérie VERDIER** (IRD, Montpellier, France)  
**Dr. Claire NEEMA** (SupAgro et CIRAD, Montpellier),  
**Dr Diana FERNANDEZ** (IRD, Brésil),  
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**Dr Georges PELLETIER** (Académie des Sciences, France),  
**Prof. Pierre AUGER** (Académie des Sciences, France),  
**Prof. DIEGANE Diouf** (Université Cheick Anta DIOP de Dakar, Sénégal),  
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**Prof. Ousmane KOÏTA** (Université des Sciences et Techniques du Mali, Bamako, Mali),  
**Prof. Justin PITA** (Programme WAVE, Université Félix HOUPHOUËT BOIGNY d'Abidjan, Côte d'Ivoire),  
**Prof. Abdourhamane SANGARE** (CNRA, Abidjan, Côte d'Ivoire),  
**Prof. Daouda KONE** (Wascal, Accra, Ghana).