



PROGRAMME REGIONAL DE PRODUCTION INTEGREE DU COTON EN AFRIQUE

Bénin, Burkina Faso, Cameroun,
Côte d'Ivoire, Mali, Sénégal,
Tchad et Togo

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INFOS PR-PICA

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2024/2025 COTTON SEASON

Monitoring PR-PICA activities in Côte d'Ivoire

2024/2025 cotton season was marked in September by fairly abundant rainfall in most of the Program's countries, leading to flooding in places in some countries.

Pest pressure in September 2024 was characterized by low to moderate infestations of carpophagous pests, notably *Helicoverpa armigera*. As for sucking biters, infestations are still dominated in all countries by the jassid, *Amrasca biguttula*.

As part of the monitoring of activities for the 2024/2025 season, missions to visit trials were carried out in Côte d'Ivoire and Burkina Faso.

In addition, the PR-PICA has received financial support from the UEMOA Commission to control the jassid *Amrasca biguttula*.

RAINFALL FOR THE MONTH OF SEPTEMBER 2024

Agro-ecological zones	Dekad	Bénin		Burkina Faso		Cameroun		Côte d'Ivoire		Mali		Sénégal		Tchad		Togo	
		nber days	height (mm)	nber days	height (mm)	nber days	height (mm)	nber days	height (mm)	nber days	height (mm)	nber days	height (mm)	nber days	height (mm)	nber days	height (mm)
Dry zone/ North	Dekad 1	2	50	3	41	4	28	5	117	4	56	3	51	10	63	2	53
	Dekad 2	4	67	6	97	4	65	6	111	5	72	5	104	10	77	3	63
	Dekad 3	4	70	3	38	2	18	2	23	4	89	4	155	8	43	5	101
	Total	10	187	12	176	10	111	13	251	13	217	12	310	28	183	10	218
Median zone/ Center	Dekad 1	2	35	3	43	4	69	5	130	3	125	3	47	9	75	2	15
	Dekad 2	3	58	4	67	5	61	6	95	5	113	6	120	10	85	3	52
	Dekad 3	4	67	3	42	4	81	6	79	4	40	6	161	9	42	3	35
	Total	9	160	10	153	13	211	17	304	12	278	16	327	28	201	8	103
Humid zone South	Dekad 1	1	23	3	73	4	35	7	91	5	105	5	118	10	89	2	27
	Dekad 2	2	37	4	76	2	90	3	32	5	137	8	135	10	88	3	63
	Dekad 3	3	63	4	81	2	6	4	31	7	77	8	166	9	54	3	58
	Total	6	123	12	230	8	131	14	154	17	319	20	419	29	230	8	148
AVERAGE SEPTEMBER 2024		8	157	11	186	10	151	15	236	14	271	16	352	28	205	9	156
RAINFALL DISTRIBUTION		XX		XXX		XX		XXX		XXX		XXX		XX		XX	

X= Low distribution. XX : Average distribution. XXX : Good distribution

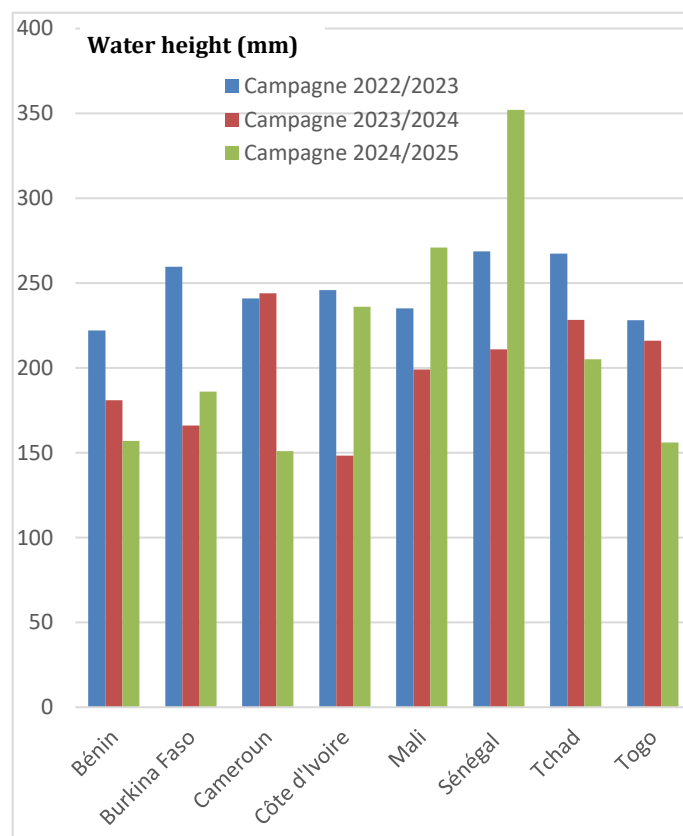
The quantities of water recorded in September 2024 were average to heavy, depending on the country, ranging from 151 mm in Cameroon to 352 mm in Senegal.

Rainfall distribution was average to good, depending on the country.

Flooding was observed in several countries:

- in Cameroon, the Tchatabali, Kaélé and Maroua 1 and 2 regions experienced severe flooding, causing crop losses;
- in Côte d'Ivoire, parcel flooding was recorded in some areas of the COIC zone;
- in Chad, rising water levels in the Chari and Logone rivers caused flooding of numerous cotton plots in four cotton production zones, namely Gaya, Doba, Koumra and Sarh.

Compared with rainfall in September of the previous season, there was a decrease in the amount of water in September 2024 in Benin (-24 mm), Cameroon (-93 mm), Chad (-23 mm) and Togo (-60 mm). On the other hand, there was an increase in Burkina Faso (+20 mm), Côte d'Ivoire (+83 mm), Mali (+72 mm) and Senegal (+141 mm).



Rainfall in September 2024 compared to the last two seasons

AVERAGE PEST SITUATION AT SEPTEMBER 30, 2024

Ravageurs	Infestation level by country								Observations
	Bénin	Burkina Faso	Cameroun	Côte d'Ivoire	Mali	Sénégal	Tchad	Togo	
<i>H. armigera</i>	XX	X	X	X	XX	X	X	X	Medium infestations in Benin, Mali and the SECO zone in Côte d'Ivoire
<i>Earias spp</i>	X	X	X	X	X	X	X	X	Low infestation
<i>D. watersi</i>	X	X	X	X	X	X	X	X	Low infestation
<i>T. leucotreta</i>	X		X	X				X	Low infestation
<i>P. gossypiella</i>	X		X	X				X	Low infestation
<i>Bemisia tabaci</i>	X	X	X	X	XX	X	XX	X	Medium infestations in Mali, Chad and in some localities in the SOFITEX zone of Burkina Faso
<i>Jassides (Amrasca biguttula)</i>	XX	X	XX	X	XXX	XX	XX	XX	Low to high infestations depending on country
<i>Jassides (Autres)</i>	X	X	X	X	X	X	X	X	Low infestation
<i>Dysdercus spp</i>	X	X	X	X	XX	X	XX	X	Average infestations in Mali and Chad
<i>A. gossypii</i>	X	X	X	X	X	X	X	X	Low infestation
<i>P. latus</i>	X		X	X	X	X	X	X	Low infestation
<i>H. derogata</i>	X	X	X	X	X	X	X	X	Low infestation
<i>A. flava</i>	X		X	X	X	X	X	X	Low infestation
<i>S. littoralis</i>	X		X	X	X	X	X	X	Low infestation
<i>Virescence florale</i>	X	X	X	X					Low infestation
<i>Fusariose</i>	X		X	X		X			Low infestation
<i>Bactériose</i>	X		X	X					Low infestation
<i>S. frugiperda (sur coton)</i>	X		X	X		X			Low infestation
<i>S. frugiperda (sur maïs)</i>	X		X	X	X	XX	X	X	Observed on maize in most countries, with low to medium levels of attack.

X = Low infestation; XX = Medium infestation; XXX = High infestation

During September, pest pressure was low to moderate in all countries, depending on the type of pest.

Moderate infestations of *H. armigera* were noted in Benin and Mali, and in a few localities in the other countries.

Sucking pests are still dominated by the jassid *Amrasca biguttula*, with average to heavy infestations depending on the country. Medium infestations of whiteflies were also observed in Mali, Chad and in certain localities in the SOFITEX zone of Burkina Faso.

In Côte d'Ivoire, cotton mosaic was observed in Dianra village (Zone IVOIRECOTON).

As for mites, they have been observed in several localities in the SOFITEX zone in Burkina Faso. The use of abamectin-based products is recommended.

With the appearance of the *Dysdercus* bug in several countries, staggered harvests are recommended to limit degradation of fiber and seed quality:

- **First harvest: When 50% of bolls have opened.**
- **Second harvest: When the remaining bolls have opened.**

VISIT TO PROGRAM TRIALS IN CÔTE D'IVOIRE

From September 16 to 20, 2024, a PR-PICA technical mission, comprising the Head of the Entomology Commission, Dr. S. A. Omer HEMA, and the Executive Secretary, Félix SAWADOGO, visited Côte d'Ivoire. The aim of the mission was to assess the progress made in setting up and monitoring trials in collaboration with agro-pharmaceutical firms, as well as those conducted under the PR-PICA program.

In Bouaké, the delegation paid a courtesy call on Dr Cyrille N KOUASSI, Regional Director of the National Center for Agronomic Research (CNRA) in Bouaké.

It then went to the Bouaké cotton station, where several trials were visited. These included

- efficacy trials on several new anti-jassid products;
- seed treatment trials;
- agronomic efficacy trials on foliar biostimulants;
- late sowing trials;
- Varietal improvement trials.

After Bouaké, the mission moved on to Séguéla to visit the trials at the Observation Post (P.O). It first paid a courtesy call on the Regional Director of the Ivorian Company for the Development of Textiles (CIDT), Mr. Lucien KOUAME. At the Observation Post, the delegation was able to visit the PR-PICA trials. These included :

- agronomic efficacy trials of foliar biostimulants ;
- trials of new adapted phytosanitary protection programs;
- Crop loss trials and effectiveness of popularized protection programs;
- efficacy testing of new anti-jassid products.

Back in Bouaké, the mission visited the Cotton Program laboratory, starting with the essential oil extraction unit. Essential oils from over 10 plant species were extracted and tested for their efficacy against insect pests, phytopathogenic fungi and nematodes.



Visit to the trials at the Séguéla P.O. with CIDT Regional Manager Lucien KOUAME (3rd from left).



Visite des essais à la station coton de Bouaké

The delegation then visited the insect breeding laboratory, where two species of Lepidoptera (*Helicoverpa armigera* and *Spodoptera frugiperda*) are bred. The main difficulty is the supply of certain ingredients for the breeding diet.

At the end of the technical mission to Côte d'Ivoire, the overall conclusion was that the program's trials had been effectively set up and conducted.

Pest infestations were low to average overall. However, heavy infestations of the jassid *A. biguttula* were observed on untreated plots.

Mission recommendations :

- ✚ strengthen health monitoring to detect new pests likely to cause damage to cotton plants at an early stage;
- ✚ consult entomologists to improve jassid control in agronomy trial plots;
- ✚ review and adapt the harvest loss and efficacy of extension protection trials;
- ✚ perform LC50 tests on the new jassid species using the main effective products;
- ✚ transiting larvae from L5 onwards at 20°C before placing them in the pre-pupal stage at 15°C, for acclimatization reasons.
- ✚ contact the IRC laboratory in Benin to obtain the address for supplying the complete diet.



Visit to the cotton program's entomology laboratory in Bouaké

VISIT TO SOLEVO AND FMC PRODUCT TRIALS IN BURKINA FASO

As part of the monitoring of activities for the 2024/2025 campaign, a delegation from SOLEVO and its partner FMC visited trials of their insecticide product SULEXIN at the Farako-Bâ research station in Burkina Faso on September 26, 2024.

SOLEVO was represented by Jacques HOMMES, Head of the Group's Plant Protection Products Business, Manoé René SANOU, Head of Research and Development, and Georges VALIA, Technico-Commercial.

FMC was represented by Development Manager Lou Reine DIE.

The delegation was accompanied by PR-PICA Executive Secretary Mr. Félix SAWADOGO.

As a reminder, SOLEVO and FMC, as part of their partnership with PR-PICA, have requested technical assistance from the Program for the 2024/2025 season, to conduct trials of their product through cotton research institutes in Burkina Faso, Mali and Côte d'Ivoire.

SULEXIN is a product designed to control biting and sucking cotton insects, in particular aphids and jassids, including the new *Amrasca biguttula* species.

It should be noted that this product is in its second year of testing, and is also undergoing pre-extension trials with cotton companies.

Positioning trials for SULEXIN have been set up to enable recommendations to be made and this binary specialty insecticide to be optimized within the various protection programs.

At the end of the visit, the following observations were made:

- ✓ **effective implementation and good conduct of trials;**
- ✓ **satisfactory mid-term results for all trials.**



Delegation visiting the trials in Farako-Bâ

INTEGRATED MANAGEMENT OF THE NEW JASSID SPECIES, *AMRASCA BIGUTTULA*



The UEMOA Commission provides financial support to PR-PICA!

The 2022/2023 agricultural season has been marked by severe attacks on crops, particularly cotton, by a new species of jassid (*Amrasca biguttula*), with major crop losses in cotton-producing UEMOA member states.

In terms of production, yields have fallen by between 8% and 50% compared with the average for the last five years.

In economic terms, losses ranged from CFAF 1.3 billion to CFAF 72.2 billion, depending on the country, giving a total loss of CFAF 214.5 billion for the 6 cotton-producing member states of the UEMOA zone.

Severe attacks by this pest have also been observed on vegetable crops, notably okra, tomatoes and eggplants, posing a serious threat to food and nutritional security.

In view of the scale and progression of this scourge, a plea was made to the UEMOA Commission, requesting its support in finding appropriate and rapid solutions for the benefit of producers and cotton companies.

Sensitive to this problem, and convinced of the relevance of a regional approach to dealing with the scourge, the UEMOA Commission has awarded a grant of sixty million (60,000,000) to PR-PICA, to help implement the Integrated Management of Jassids Project in UEMOA countries.

A first instalment of thirty million (30,000,000) CFA francs received in mid-February 2024, has been mobilized to carry out the following three activities, which are currently being implemented:

✚ Evaluation of the efficacy of new active ingredients against *A. biguttula*, with a view to registration

Insecticide products used against *A. biguttula*, although effective, are not yet registered in most UEMOA countries.

Trials of these insecticide products are underway in all countries, with a view to their registration, notably by the Sahelian Pesticides Committee (CSP) or the West African Pesticides Approval Committee (COAHP), which is in the process of becoming operational.

In addition, experiments are underway to find the best positioning of active ingredients against *A. biguttula* in the plant protection program for effective control of this pest.

✚ Molecular identification of strains of the new jassid species *A. biguttula* present on cotton and vegetable crops.

The aim of this study is to use the molecular method to identify the strains of *A. biguttula* present on cotton and vegetable crops, for effective management of this pest.

Samples of jassids have already been collected in each country in three (3) agro-climatic zones of cotton and vegetable production, and sent to the genetics laboratory of Cheick Anta DIOP University in Dakar, Senegal, for analysis.

✚ Toxicological and ecotoxicological assessment of pesticides effective against *A. biguttula*.

The health and environmental risks of the anti-jassid pesticides used are not yet known, although they could be used (or are even being used) by growers on vegetable crops and legumes

(okra, eggplants, tomatoes, kenaf, roselle, chillies, soybeans, cowpeas, etc.) are also attacked by jassids; hence the need to carry out toxicological and ecotoxicological assessments of these pesticides, so that appropriate decisions can be taken.

To this end, studies are underway, in collaboration with Burkina Faso's Health Sciences Research Institute (IRSS), to measure the residues of anti-jassid insecticide products on market garden crops, and to determine the oral and dermal Lethal Doses 50 (LD50) of these products.

The results of these studies are expected by early 2025 at the latest, and will be the subject of presentations and discussions at forthcoming meetings of the UEMOA phytosanitary sub-committee and the PR-PICA review meeting.

The second instalment of the grant, which is expected from the UEMOA Commission, will enable the implementation of other activities to improve management of this pest. These include

- identification of the natural enemies of *A. biguttula* ;
- evaluation of biological products against *A. biguttula* on organic cotton and market garden crops;
- evaluation of the susceptibility of new cotton varieties to *A. biguttula*;
- study of the preferences of *A. biguttula* towards cotton and some host plants (okra and eggplant);
- identification of other insecticide molecules effective against *A. biguttula*, to avoid the development of resistance to proven products currently in use.

PR-PICA AGENDA

October 21 - 26, 2024 in Mali:

Visit to trials and exchanges with cotton sector stakeholders