



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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MONITORING OF PR-PICA ACTIVITIES IN CAMEROUN AND SENEGAL

The month of September 2022 was marked by abundant rainfall in all the countries, causing in some places flooding, leaching of treatment products and difficulties in crop maintenance.

The parasitic pressure was dominated as in August by jassids. Medium to heavy infestations with considerable damage were observed in all countries except Benin and Cameroon.

This problem led the researchers of the Program's Entomology Commission to hold a meeting by videoconference to review the infestations and propose solutions.

In addition, to follow the evolution of the activities of the 2022/2023 season, a PR-PICA delegation led by its President, stayed in Cameroon and Senegal from 5 to 16 September 2022. The delegation was able to visit the trials and tests set up and to exchange with the actors of the cotton sector of these two countries.

RAINFALL DATA FOR SEPTEMBER 2022

| Agro-ecological zones | Décade | 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) | nbre jrs | haut. (mm) | nber days | height (mm) | nber days | height (mm) | nber days | height (mm) |
| Dry zone/ North | Décade 1 | 4 | 100 | 5 | 113 | 6 | 100 | 6 | 121 | 5 | 147 | 6 | 121,4 | 4 | 119 | 4 | 53,4 |
| | Décade 2 | 5 | 98 | 4 | 122 | 4 | 31 | 4 | 120 | 2 | 92 | 4 | 83,5 | 4 | 112 | 4 | 93,9 |
| | Décade 3 | 4 | 65 | 3 | 48 | 2 | 7 | 6 | 105 | 6 | 36 | 4 | 63,4 | 3 | 44 | 4 | 69,2 |
| | Total | 13 | 263,0 | 12 | 283 | 12 | 138 | 16 | 346 | 13 | 275 | 14 | 268,3 | 11 | 275 | 12 | 216,4 |
| Median zone/ Center | Décade 1 | 3 | 58 | 4 | 80 | 6 | 130 | 3 | 53,4 | 4 | 85 | 4 | 94,1 | 4 | 102 | 3 | 62,6 |
| | Décade 2 | 4 | 111 | 4 | 110 | 5 | 98 | 6 | 101,3 | 3 | 49 | 5 | 89,6 | 4 | 117 | 4 | 148,6 |
| | Décade 3 | 3 | 63 | 2 | 54 | 2 | 42 | 4 | 81,9 | 5 | 92 | 4 | 65,4 | 3 | 65 | 4 | 76,3 |
| | Total | 11 | 230,9 | 10 | 245 | 13 | 270 | 13 | 236,6 | 12 | 226 | 13 | 249,1 | 11 | 284 | 11 | 287,5 |
| Humid zone South | Décade 1 | 3 | 48 | 6 | 125 | 7 | 162 | 2 | 29 | 4 | 70 | 5 | 125,7 | 4 | 88 | 2 | 21,8 |
| | Décade 2 | 3 | 52 | 4 | 94 | 8 | 105 | 3 | 55 | 5 | 78 | 6 | 90,8 | 4 | 83 | 4 | 51,8 |
| | Décade 3 | 4 | 74 | 2 | 32 | 5 | 47 | 6 | 71 | 6 | 55 | 5 | 71,9 | 3 | 72 | 4 | 106,8 |
| | Total | 10 | 173,6 | 12 | 251 | 20 | 314 | 11 | 155 | 15 | 203 | 16 | 288,4 | 11 | 243 | 10 | 180,5 |
| AVERAGE SEPTEMBER 2022 | | 11 | 222 | 11 | 259,6 | 15 | 241 | 13 | 245,9 | 13 | 235 | 14 | 268,6 | 11,0 | 267,3 | 11 | 228,1 |
| RAINFALL DISTRIBUTION | | XX | | XXX | | XXX | | XXX | | XX | | XX | | XXX | | XXX | |

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

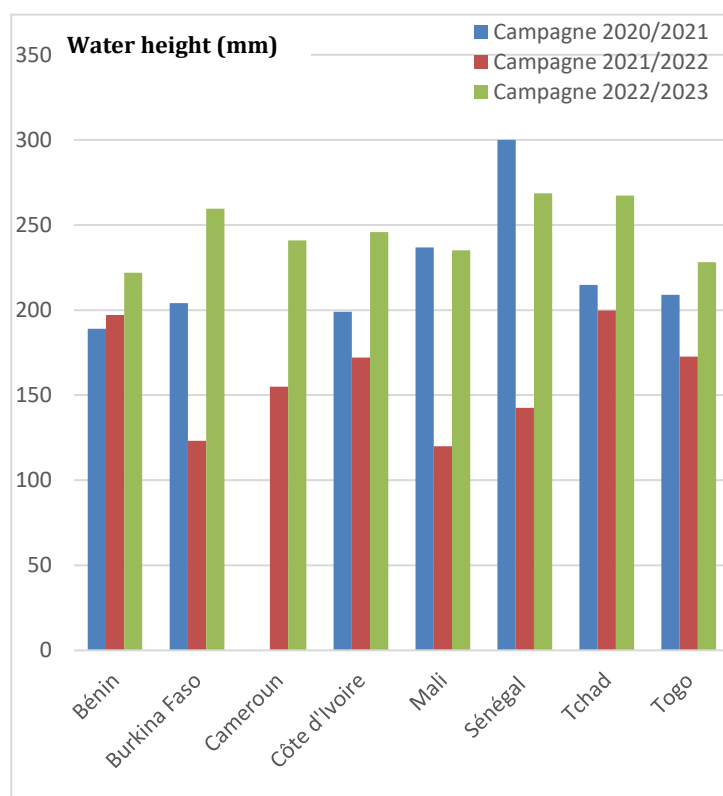
The water quantity recorded in this month of September 2022 was good with rainfall amounts above 200 mm in all countries. This month of September was rainier than the month of August 2022.

The rainfall frequency was average to good, depending on the country.

The heavy rainfall recorded in the first and second decades caused flooding of plots, leaching of treatment products and difficulties in crop maintenance in most countries. Plot losses were also recorded. This is the case in Benin (700 ha) and Burkina Faso (214 ha).

In Chad, these floods are mainly due to capillary rise and river overflows in the Gounou-Gaya cotton area.

Compared to the rainfall in September of the previous season (2021/2022), there has been a significant increase in the amount of water in September 2022 in all countries, ranging from +25 mm in Benin to 136 mm in Burkina Faso.



Rainfall in September 2022 compared to the last two seasons

AVERAGE PEST SITUATION AT 30 SEPTEMBER 2022

| Pests | Infestation level by country | | | | | | | | Observations |
|----------------------------------|------------------------------|------------------------|----------|---------------|------|---------|-------|------|---|
| | Bénin | Burkina Faso (SOFITEX) | Cameroun | Côte d'Ivoire | Mali | Sénégal | Tchad | Togo | |
| <i>H. armigera</i> | XX | X | X | X | X | XX | X | X | Medium infestations in Benin and Senegal. |
| <i>Earias spp</i> | XX | X | X | X | X | XX | X | X | Medium infestations in Benin and Senegal (Koussanar, Vélingara, Kolda and Pakour areas) |
| <i>D. watersi</i> | XX | X | X | X | X | X | X | X | Medium infestations in Benin |
| <i>T. leucotreta</i> | X | X | X | X | | | X | X | Low infestation |
| <i>P. gossypiella</i> | XX | X | | X | | | X | X | Medium infestations in the Global Cotton zone in Côte d'Ivoire. |
| <i>Bemisia tabaci</i> | X | X | X | X | XX | XX | X | X | Average infestations in Mali (North-East and West subsidiaries) and Senegal. |
| Jassides | X | XXX | X | XXX | XXX | XXX | XX | XXX | High infestations in all countries, except Benin and Cameroon |
| <i>Dysdercus spp</i> | X | X | X | X | XX | XX | X | X | Medium infestations in Mali (North-East subsidiaries) and Senegal. |
| <i>A. gossypii</i> | X | | X | X | X | XX | X | X | Medium infestations in Senegal |
| <i>P. latus</i> | X | X | X | X | X | | | | Low infestation |
| <i>H. derogata</i> | X | X | X | X | X | X | XX | X | Medium infestations in Tchad |
| <i>A. flava</i> | X | X | | X | X | X | X | X | Low infestation |
| <i>S. littoralis</i> | X | X | X | X | X | X | X | X | Low infestation |
| Virescence florale | X | X | X | XX | | X | X | | Medium infestations in the COIC and IVOIRE COTON zones in Côte d'Ivoire. |
| Fusariose | X | X | X | X | | X | X | | Low infestation |
| Bactériose | X | X | X | | | X | X | | Low infestation |
| <i>S. frugiperda (sur coton)</i> | X | | | X | | | | | Low infestation |
| <i>S. frugiperda (sur maïs)</i> | | | XX | XX | X | XX | XX | XX | Observed on maize in most countries with low to medium attacks |

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

Pest infestations in September 2022 were dominated by sucking bugs, especially jassids. As in August, heavy infestations with considerable damage were observed in all countries except Benin and Cameroon.

In addition to jassids, white flies and *Dysdercus* bugs were recorded with medium infestations in Mali and Senegal.

As for carpophagous pests, medium infestations of *H. armigera* and *Earias spp* were observed in Benin and Senegal.

The armyworm, very weakly observed on cotton, is still present on maize in most countries with average infestations.

To limit the degradation of fiber and seed quality caused by jassids and *Dysdercus* bugs, staggered harvests are recommended:

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

ENTOMOLOGY COMMISSION MEETING

PR-PICA Entomologist Researchers exchange by videoconference on the problem of massive infestations of jassids

On September 29, 2022, a meeting of the PR-PICA Entomology Commission was held by videoconference, on the problem of jassid infestations during the 2022/2023 agricultural season. It was attended by Entomological Researchers of the member countries of the Program, and a representative of the Steering Committee.

The meeting, chaired by Dr. Omer HEMA, Head of the Entomology Commission, went well and the following can be noted:

✚ All the countries except Benin, Cameroon and Chad to a lesser degree have experienced heavy infestations of jassids with considerable damage to cotton plants;

✚ Experiments are underway in the laboratory and in the field with available products that have proven to be effective against jassids. Also, trials are being conducted on new active ingredients;

✚ For this 2022/2023 season, strategies have been proposed to deal with the jassid situation, including

- Use the available effective products recommended by researchers for current phytosanitary treatments;
- Continue sensitizing producers to continue insecticide treatments in plots where it is still necessary;
- To reconcile the treatments at intervals of one week or 10 days in the countries where it was 14 days;
- To proceed with the split harvest of cotton to limit the degradation of the quality of the fiber and the seed.

✚ In anticipation of the next crop year 2023/2024, proposed strategies for effective jassid management were made:

- Use effective registered and also unregistered crop protection products. For unregistered products, the different actors in the sector must take the necessary steps to obtain a special exemption from the regulatory authorities.
- Treat seeds correctly with seed treatment products containing an excellent systemic insecticide;
- Sensitize the producers to make a good organic and mineral fertilization;
- Use biostimulants whenever possible;
- Practice pollarding whenever possible;
- Use cotton growth regulators (PIX) if possible;

- Carry out grouped phytosanitary treatments for the plots of the same block;
- Avoid cultivating malvaceous plants (okra, sorrel, cucumber, roselle, kenak) in the immediate vicinity or in cotton plots;
- Use yellow traps to capture jassids and give the alert;
- Involve other agricultural sectors in the management of jassids.

At the end of the meeting, the following recommendations were made :

❖ To the cotton companies

- ✓ Involve actors from other agricultural sectors in jassid management;
- ✓ To make available to producers, the molecules consensually retained by entomologists as well as the other inputs able to reduce the impact of jassid attacks on cotton plants.

❖ To the PR-PICA Steering Committee

- ✓ To organize a meeting of the researchers in mid-November 2022, for the capitalization of the results of the activities under experimentation in order to propose new and more efficient products;
- ✓ To provide researchers with yellow traps for monitoring the dynamics of jassids in cotton and vegetable plots;
- ✓ To take charge of the molecular characterization of jassids from the different PR-PICA countries.

❖ To the Entomologist Researchers

- ✓ To propose cotton protection programs taking into account this new concern;
- ✓ To establish the toxicity of the main molecules on jassids in order to monitor the sensitivity of this pest to the toxics used;
- ✓ To make studies on the bio-ecology of jassids.
- ✓ To write a memorandum on jassid infestations for the attention of cotton companies and interprofessions and a plea on the products tested but not yet registered.

❖ To the Breeders Researchers

To select cotton varieties with good hairiness in number and size.

REGIONAL MONITORING OF THE 2022/2023 SEASON ACTIVITIES

A PR-PICA delegation visits the trials and exchanges with the actors of the cotton sectors in Cameroon and Senegal

From 5 to 16 September 2022, a PR-PICA mission composed of the President, Mr. KODJANE N'DIAMOI, the Executive Secretary, Felix SAWADOGO and the Researcher, Dr. Malanno KOUAKOU, stayed in Cameroon and Senegal, with the objectives of visiting field activities and exchanging with the actors of the cotton sector of these two countries.

In Cameroon, the PR-PICA delegation had meetings with :

- ✓ The PR-PICA National Coordination;
- ✓ The Director General of SODECOTON, Mr. MOHAMADOU BAYERO;
- ✓ Representatives of the National Confederation of Cotton Producers (CNCP), led by the Vice-President, Mr. BEBNONE PAYOUNNI;
- ✓ The Head of the Station of the Institute for Agricultural Research and Development (IRAD) of Boklé, Dr Simon BASGA.

The delegation presented the program, collected the partners' expectations and exchanged on the progress of the cotton season and the prospects of the sector.

In addition to these exchanges, the delegation visited the trials and tests set up under the Program in the Ngong region and in the Gaschiga and Sangueré sectors. These are the following experiments:

- Evaluation of crop losses and effectiveness of treatment programs in controlled and farmer environments;
- Monitoring the dynamics of adult pest populations;



Experiment on monitoring pest and disease infestations in the field

- Evaluation of the effect of the growth regulator (Pix 5%) on the yield of the cotton plant;
- Multiplication of F1 seeds of 182 progenies from 14 diallel crosses;
- Evaluation of the effect of different doses of nitrogen on cotton yield;
- Monitoring of pest and disease infestations in the field.

The delegation also visited the entomology laboratory of SODECOTON in Garoua and the ginning plant in Ngong.



The PR-PICA delegation with the General Manager of SODECOTON, Mr. MOHAMADOU BAYERO (center) in Garoua



The PR-PICA delegation with CNPC officials in Garoua

After Cameroon, the PR-PICA delegation went to Senegal where it exchanged with:

- ✓ The Director General of SODEFITEX, Mr. Papa Fata N'DIAYE;
- ✓ The Director General of the Senegalese Institute of Agricultural Research (ISRA) Dr Momar Talla SECK;
- ✓ The PR-PICA National Coordination;
- ✓ The Vice-President and the Executive Director of the National Federation of Cotton Producers of Senegal (FNPC), Mr. N'Dila BALDE and Mr. Hamidou DIAO.

The exchanges focused on the massive infestations of jassids and the considerable damage caused.

The delegation then visited the trials and tests set up in Koussiana, Vélingara and Kounkané. These are :

- Evaluation of the effects of sowing dates and sowing density of cotton on yield;
- Effect of the growth regulator according to the sowing date;
- Evaluation of the effects of different doses of nitrogen;
- Evaluation of the effectiveness of three fertilizer formulas enriched in CaO, MgO and Zn;
- Crop losses and effectiveness of extension treatment programs;
- Evaluation of varietal sensitivity;
- New treatment programs incorporating Biopesticides;
- Three-tiered plant protection program;
- Evaluation of the effectiveness of new active ingredients against jassids.



The PR-PICA delegation with the Director General of ISRA, Dr Momar Talla SECK (2nd from the right)



Experiment on the dates and densities of sowing at the station of Koussiana



The PR-PICA delegation with the General Manager of SODEFITEX, Mr. Papa Fata N'DIAYE (center)

The following observations emerged from this mission to Cameroon and Senegal:

- ✚ Effective implementation and good conduct of the program trials;
- ✚ Good appreciation by the cotton sector actors of the results of the research activities obtained by the Program;
- ✚ Commitment of cotton sector actors in these two countries to support PR-PICA in its activities;
- ✚ Very high infestation of jassids in Senegal and a challenge to the Program through its researchers to find solutions against this pest.