

# EARLY WARNING BULLETIN FOR FOOD SECURITY

No. 2018/10

## IN THE GAMBIA

Period: August 1-10, 2018



Government of The Gambia

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Multidisciplinary Working Group

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### 1.0. SYNOPTIC SITUATION:

The average surface position of the ITD has its western axis lying over northern Senegal, stretching across central Mali/Niger and then slanting onto Chad.

The places to the north of the ITD were mainly dry and stable with occurrence of patches of dust haze over northern parts of Niger, Mali and Algeria during the period.

To the south of the ITD, however, moderate to heavy rains and thunderstorms, occasionally associated with strong winds affected much of the sub-region including Ivory Coast, Ghana, Burkina Faso, Nigeria, Senegal and The Gambia during the dekad.

### 1.1. OUTLOOK FOR THE NEXT DEKAD (11<sup>th</sup> - 20<sup>th</sup> August 2018):

Generally humid atmosphere with slight to moderate rain showers and thunderstorms, occasionally associated with strong winds are expected over the country on the 13<sup>th</sup>, 15<sup>th</sup>, 16<sup>th</sup> and 20<sup>th</sup> August 2018. All the occurrences are expected to be intense at the Eastern Sector.

### 2.0 RAINFALL SITUATION

In this dekad, significant rainfall was recorded across the country thus causing this dekad to receive more rainfall than all the other dekads during this season in terms of intensities and frequencies. Dekadal intensities ranging from **87.8mm** to **197.4mm** were recorded in the Western Third; **58.4mm** to **179.8mm** in the Middle Third and **115.1mm** to **129.8mm** were recorded in the Eastern Third of the country (fig 1a).

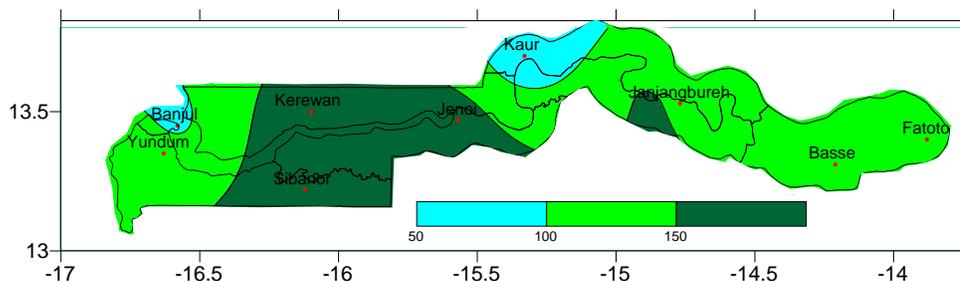
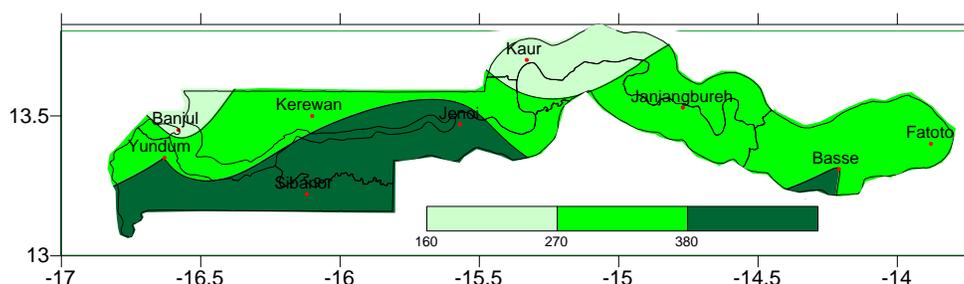


Figure 1a: Rainfall dekadal totals 1<sup>st</sup> - 10<sup>th</sup> August 2018.

The highest seasonal rainfall total was recorded in the Western Third with Sibanor recording **454.6mm** and the lowest was in the Middle Third with Kaur recording **178.6mm**, figure1b below.



**Figure 1b:** Seasonal rainfall totals from May 1<sup>st</sup>, 2018 – August 10<sup>th</sup>, 2018.

As at August 10, 2018 deficits continued to be recorded throughout the country compared to both last year (2017) the long term (1981 – 2010). Highest deficits were **252.3mm** and **149.8mm** recorded over Jenoi and Kaur respectively as compared to the preceding season and the long term average.

### 3.0 AGROMETEOROLOGICAL SITUATION

During this period under review, average temperatures has drop significantly across the country compared with the previous dekad of which can be denoted to the frequencies and intensities of rainfall received in this dekad than the last one. Minimum temperature was 20°C recorded over Jenoi in the Middle Third of the country, whilst maximum temperature was 34°C recorded over Janjangbureh in the Middle Third of the country.

Winds in this dekad were generally light to moderate in speed across the country.

Average relative humidity during the dekad generally reached 80% and above across the country, thus indicating an increase in relative humidity compared with last dekad.

### 4.0 AGRICULTURAL SITUATION

#### North Bank Region

The main agricultural engagements of farmers in this region are weeding and fertilizer application in the upland fields. Some groundnut fields that were sown during the early rains are flowering, whilst maize is also at reproductive stage and rice is at nursery stage for onward transplanting to the lowlands. *Fall Army worm* is still in existence in this region, among the control methods given to farmers by Agriculture workers is by spraying on them using *neem tree* which some farmers turn out to report that it was effective.

#### Central River Region North

In this region, farmers are busy weeding. Planting could not finish due to inadequate rain. Replanting is also taking place because of poor germination. However, the phonological stages of crops sown earlier ranged between germination to vegetative stages. In the lowland fields, some farmers are engaged in harvesting of dry season rice fields whilst also transplanting of nurseries for the wet season.

#### Central River Region South

Weeding is in progress in this region. Some farmers were engaged in replanting due to poor germination cause by insufficient rain. Some early millet and groundnuts fields are at germination and vegetative stages. Other farmers who were engaged in the production of rice during the dry season are harvesting them but some are



The fall armyworm is an Alien Invasive Species (AIS) in the Gambia however there are great potentials for the pest to attain endemic status. The weather factors of the Gambia are very favorable which enables the pest to survive and multiply in both the dry and rainy seasons. The female can lay up to 1500-2000 eggs in its life time of about 3 to 4 weeks and the life cycle from egg to adult completes with 4 weeks depending on the weather. This allows the pest to have three overlapping generations which incur damages to the seedling, flowering and maturity stages.



**Figure 4:** FAW damages all the phonological stages of the plant

In 2018, the pest caused severe damages to the irrigated maize fields which served as hotspots for the incoming season. To ascertain the level of infestation and spread, the Plant Protection Services and NARI with support from FAO embarked on a field surveillance survey. Ten sites were selected at random in every region. The table below gives a summary of the pest status.

No.	Region	No. of farmers	No. of villages	Total Hectare	Infested (ha)	Non Infested (ha)	% infestation
1	WCR	10	10	14.55	14.55	0	100%
2	LRR	10	10	7.35	7.35	0	100%
3	CRR/S	10	10	5.34	4.59	0.75	85.9%
4	URR	10	10	5.35	4.35	1	81.3%
5	NBR	10	10	9	7.47	1.53	83%
6	CRR/N	10	10	7.98	5.98	2	74.9%

The fall armyworm has engulfed the whole nation since the first year of occurrence. One out of every two maize field is infestation with the pest. The fields surveyed in the WCR and LRR were all infested and the damage observed threatens the growth and potential yield of the crop. The regions of CRR/S, URR and NBR have pockets of farms free of the pest as of the time of the survey but there is a greatly likelihood of infestation in the subsequent weeks. The Northern part of Central River (CRR/N) had the least percentage infestation with two (2) hectares out of the seven (7) found to be free. A similar situation was also observed during the first year of invasion. Considering the ability of the pest to devour crops, there is a significant threat to household food security, incomes and the country's food security as a whole. Therefore the Government and its development partners should map out a holistic approach in supporting vulnerable farmers and communities in order to stem the imminent prospects of food crisis.

### Management Options currently adopted for the pest

The life cycle and behavior of the pest has made it difficult to control the pest. The pest hides in the whorls (growing point) of the maize, feeding on the emerging leaves thus leading to stunted growth. Because it is also hiding inside the whorls, the usual aerial spraying especially for contact pesticides appears almost futile. The pest is also reported to have developed resistance to the most widely used contact and systemic insecticides. Therefore the current recommended management option for the pest is Integrated Pest Management (IPM) which combines as much as possible all the recognized and compatible management options. For example;

- Application of seed dressing chemicals to seeds prior to sowing
- Use of good agricultural practices in production
- Maintaining a clean field free from weeds and volunteer plants

- Regular monitoring of the plants for early detection and destruction of the pest
- Application of botanicals (neem, hyptis, eucalyptus, etc) inside the whorls of the maize plant
- Application of a mixture of wood ash and sand in the whorls
- intercropping maize with cassava
- Use of bio-pesticides e.g. (*Bacillus thurengiensis* (Bt), *Beauveria bassiana*, Metherezium etc)
- Use of natural enemies of pest (predators and parasitoids) such as ladybird beetles, earwigs, Trichogramma etc.

### **Spiraling white Fly (*Aleorodicus dispersus*)**

This is also another Alien Invasive Species which attacks a wide range of fruits and vegetables in the Gambia. It led to the death of many plants in the year 2012-2013 causing significant economic losses to farmers. The SWF is mainly found in the WCR, LRR and NBR. Currently the pest is being checked by natural control factor which has reduced its population to below levels causing economic injury. The natural control factor is a parasitoid called the *Encarsia guadeloupe* and *Encarsia disperse*. This parasitoid silently parasitizes the pest and kills it eventually thus putting a balance to its population growth. This natural phenomenon drastically reduced the potential of the pest to threaten fruits and vegetable production. In order to maintain the population of these parasitoids, harmful or toxic pesticide regimes should be avoided.



**Figure 3:** Eggs, larvae and adults of the SWF

### **Management options applied**

An IPM approach is also used to manage this pest;

- Conservation and argumentation of the already available natural control factor (*Encarsia Spp*)
- Use of botanicals (plant derivatives) such as neem, eucalyptus, papaya, etc
- Use of detergent e.g. Madar, Saba, Omo, etc (30g in 10L of water and spray of the infested plant leaves)
- Use of yellow sticky traps
- Use of pheromones to attract and kill

### **7.0. LIVESTOCK SITUATION:**

During the period under review, outbreak of Foot and mouth Disease (FMD) was reported in the Central River Region North in which about 66 mortalities (deaths) were recorded. This outbreak involved two villages (Ndowen and Njalal Samba) in the Niani District with a susceptible population of 1300 and 1400 animals respectively. In Ndowen a total of 330 cattles were affected with 44 deaths whereas in Njalal samba a total of 110 cattles with 22 deaths. In both Villages another 73 sheep were affected without any mortalities. Laboratory

analysis of collected samples from the two villages confirmed FMD positive by *Reverse transcription polymerase chain reaction* (RT-PCR) and revealed the serotype “O” of the virus.

In the period under review, 2032 animals were treated against several diseases and disease conditions. Of the total number of treated animals, there were 624 cattle, 435 horses, 421 goats, 370 sheep and 164 donkeys. There were also 5 camels, 4 rabbits, 4 chickens and a turkey treated during this period.

There were different diseases and disease conditions that these animals were treated against.

Banjul August 14, 2018

National MWG of The Gambia

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