

**Emergency Transboundary Outbreak
Pest (ETOP) Situation Report for
September with a Forecast till mid-
November, 2013**

Summary

The Desert Locust (SGR¹) situation remained relatively calm in **Sahel West Africa** in September. In **Yemen**, locusts were detected in several places in the interior of the country, but control operations treated only 5,000 ha due to ongoing insecurity situation and resentments from the beekeepers to the use of pesticides. Small-scale breeding is underway in eastern **Sudan** between the Nile River and the Red Sea Hills. Breeding is in progress on the central Red Sea coast in **Saudi Arabia**. Other countries in the central regions remained fairly calm during this period. Low numbers of adults were detected in a few places along both sides of the **Indo-Pakistan** border in September (CNLA/Chad, CNLA/Mauritania, CNLAA/Morocco, DLCO-EA, DPPQS/India, FAO-DLIS, INPV/Algeria, PPD/Oman, PPD/Sudan).

Forecast: Breeding will continue in **Yemen**, in the Central Red Sea coast in **Saudi Arabia** and in the summer breeding areas in **Sudan**. **Niger, Mali, Mauritania** and **Chad** will see small-scale breeding and a slight increase in locust numbers, but **North Africa** will remain calm during the forecast period. The **Indo-Pakistan** borders will witness more locusts, but other countries in the region will remain calm during the

¹ Definitions of all acronyms can be found at the end of the report.

forecast period (CNLA/Chad, CNLA/Mauritania, CNLAA/Morocco, DLCO-EA, DPPQS/India, FAO-DLIS, INPV/Algeria, PPD/Oman, PPD/Sudan).

Other ETOPs

Red (Nomadic) Locust (NSE): NSE persisted in the Lake Chilwa/Lake Chiuta plains in Malawi and in the Ikuu-Katavi plains in Tanzania in September. NSE populations were also detected in Malagarasi Basin and Wembere plains in Tanzania, Buzi-Gorongosa and Dimba plains in Mozambique and Kafue flats in Zambia (AELGA, IRLCO-CSA).

Forecast: NSE breeding is expected in the primary breeding areas in Tanzania and Malawi as well as Mozambique and Zambia in the onset of the seasonal rain in late October. Swarms will form in early 2014. Active surveillance and monitoring remain essential (AELGA, IRLCO-CSA).

Madagascar Migratory Locust (LMC): Swarms were reported moving from the southwest outbreak areas to the western and northeastern invasion areas. Crop damage was reported in Maintirano, Tsiroanomandidy, Soavinandriana and Faratsiho areas during September. Egg laying was detected in Ranohira and Vavalovo in the central outbreak areas (FAO-DPV/LWU).

Forecast: Breeding and hatching are expected to begin at the onset of the seasonal rains which should start sometime in late October/early November. Vigilance, timely reporting and preventive interventions remain crucial.

Malagasy Locust Campaign:

The 2013-2016 locust campaign was officially launched on September 20 and aerial survey began last week. FAO reported receiving USD 23.1 million from donors and international organizations (this does not include the estimated market price of 230,000 l of pesticides donated by Morocco and Mauritania and the 45,000 l pledged by Algeria and Senegal (AELGA, FAO-DPV/LWU).

The latest locust information from FAO-DPV/Madagascar is available at:

<http://www.fao.org/emergencies/results/en/?keywords=Madagascar%20locust%20crisis>

<http://www.fao.org/emergencies/crisis/madagascar-locust/en/>

Moroccan (DMA), Italian (CIT), Migratory (LMI) Locusts in Central Asia and the Caucasus (CAC): A late received report indicated that locust operations have for the most part gradually diminished in most of the CAC region (FAO-ECLO).

Forecast: Locust activities will continue diminishing and disappear in the region during the forecast period (AELGA, FAO-ECLO).

Tree Locust (Anacridium sp.): A tree locust outbreak *was controlled in 7,500 ha in Turkana County in Kenya* (IRLCO-CSA).

African Armyworm (AAW): AAW outbreaks were not reported in DLCO-EA or IRLCO-CSA member countries in

September (AELGA, DLCO-EA, IRLCO-CSA).

Forecast: Armyworm outbreaks will likely begin at the onset of the seasonal rains from late October in Kenya and Tanzania (AELGA, DLCO-EA, IRLCO-CSA).

Quelea (QU): QU bird outbreaks occurred and controlled in Kenya and Zimbabwe in September. No major QU activities were reported elsewhere during this period (DLCO-EA, IRLCO-CSA)

Forecast: QU activities will diminish in Zimbabwe, but continue in Kenya before the birds enter into breeding cycle (DLCO-EA, IRLCO-CSA).

OFDA/TAG-AELGA (Assistance for Emergency Pest [Locust/Grasshopper] Abatement) will continue monitoring ETOP situations closely in all regions and issue dekadal alerts and monthly updates as well as provide advices as often as necessary. **End summary**

Progresses made in SGR Frontline Countries:

SGR frontline countries (FCs) in Sahel West Africa, namely **Chad, Mali, Mauritania, Niger, and Senegal** (an **invasion country**) have established autonomous national locust control units (CNLA) responsible for all DL activities.

Funds provided by the African Development Bank, USAID, the World Bank, France, FAO, host-governments as well as assistance from neighboring countries enabled FCs to equip CNLAs

and build infrastructure as well as help train staff to prevent and respond to SGR outbreaks. With these supports and with their own resources, FCs was able to minimize and avoid the threats the SGR poses to food security and livelihoods of vulnerable communities.

CNLAs' continued efforts *to prevent, mitigate, avert and/or respond to potentially devastating SGR outbreaks and invasions* are good examples of **sustainable disaster risk reduction** that *deserve* encouragements and support.

OFDA ETOP Activities and Impacts

- OFDA Advisor for Pests and Pesticides participated in a workshop and field visits to assess the Pesticide Stock Management System (PSPM) in the Western and Northern Africa region. During the workshop and the field visits, the Advisor noted progresses as well as challenges and constraints of the program and critiqued and provided comments and suggestions. The workshop was jointly organized by CLCPRO and FAO Pesticide Unit and was held in Agadir Morocco from 30 September to October 4th, 2013 (more info is forthcoming).
- Thanks to OFDA's contributions, PSMS has enabled dozens of participating countries to conduct regular inventories and make informed decisions and thereby prevent unnecessary accumulation of obsolete stocks and avoid costly disposal operations as well as ensure safety of their citizens and protect the environment.
- OFDA/TAG continues efforts in sustainable pesticide risk reduction initiatives through stewardship network (SPRRSN) programs by strengthening capacities of host-countries and partners to ensure safety of vulnerable populations and protect their assets and the shared environment against pesticide contamination. OFDA/TAG has successfully launched two sub-regional SPRRSNs in Eastern Africa and the Horn. The Horn of Africa SPRRSN initiative has created a "model" Association dubbed as Pesticide Stewardship Association-Ethiopia (PSA-E) which is viewed as a boiler plate for future initiatives.
- Discussions that began several months ago to launch similar PRR initiatives in North Africa and the Middle East were delayed by the ongoing situation in the regions. An effort is underway to resume dialogue with partners in these regions.
- OFDA continued its assistance for capacity strengthening as part of its DRR programs through a cooperative agreement with FAO to mitigate, prevent, and respond to and reduce the risk of ETOP emergencies and avoid misuse and mishandling of pesticides, pesticide-incorporated materials and application platforms.
- OFDA supported DRR program aimed at strengthening national and regional capacities for ETOP operations in Central

Asia and the Caucasus (CAC) is well underway. The program focuses on improving national and regional capacities to better coordinate locust monitoring and reporting as well as joint plans for survey, ETOP mitigation and prevention to minimize the threats they pose to food security and livelihoods of vulnerable populations.

- OFDA supported, three year program on scaling up community-based armyworm monitoring, forecasting and early warning which began in FY 2013 is in progress. The program aims at reducing the risk of armyworm threats to food security and livelihoods of rural communities and vulnerable populations. Activities are being coordinated by the DLCO-EA in collaboration with partners in Ethiopia, Kenya and Tanzania.

Note: All ETOP SITREPs, including the current one can be accessed on our websites:

<http://www.usaid.gov/what-we-do/working-crises-and-conflict/responding-times-crisis/how-we-do-it/humanitarian-sectors/agriculture-and-food-security/pest-and-pesticide-monitoring>

and

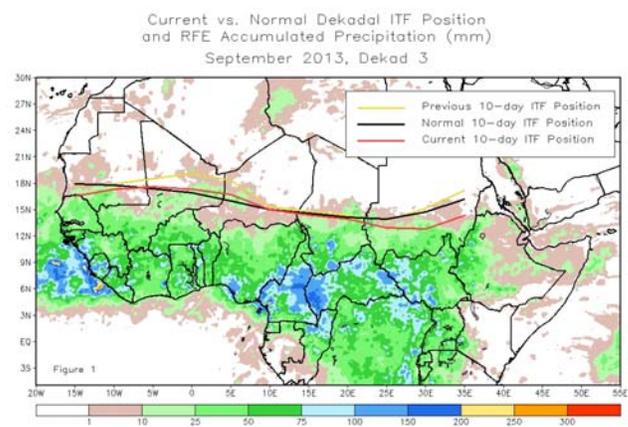
http://transition.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/locust/

Detailed accounts of the weather, recent of ETOP situation and a forecast for the next six weeks are described below.

Weather and ecological conditions

During the third dekad of September, 2013, the Inter-Tropical Front (ITF) migrated southward over eastern Africa, but remained

close to climatology for this period in West Africa. The mean western portion of the ITF (10W-10E) was located approximately at 16.8N, slightly north of its mean climatological position causing above average rain in central Mali. The mean eastern portion of the ITF (20E-35E) was located around 13.5N, 1.2 degrees south of the climatological position and 1.6 degrees south of the previous dekad's position. The southward movement of the ITF was associated with anomalous northerly winds and drier than average conditions across central Sudan.

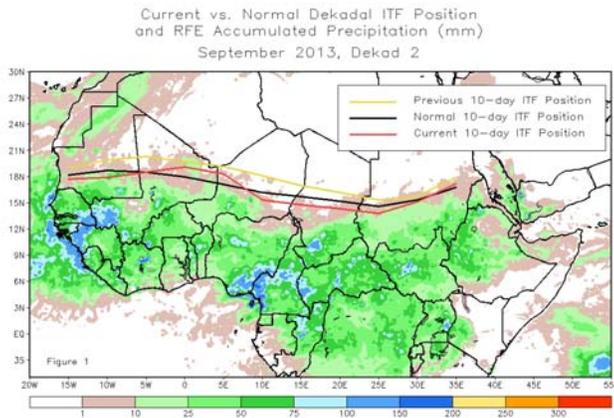


Map 1 above shows the current position of the ITF relative to its long-term average position during the third dekad of September and its previous position during the second dekad of September (NOAA, 10/2013).

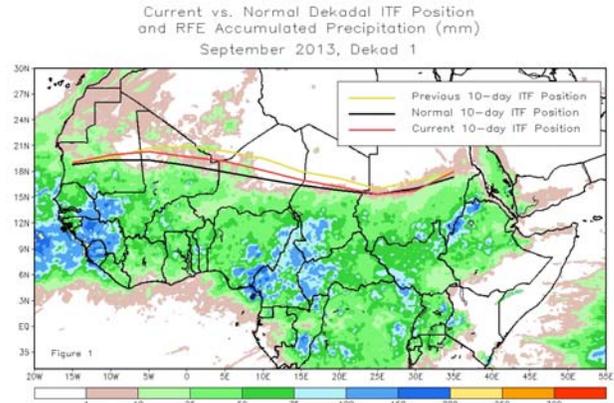
From September 11-20, the ITF remained north of climatology across parts of West Africa, but continued its southerly migration over eastern Africa. The mean western portion of the ITF (10W-10E) was located around 17.8N, 0.1 degree north of the mean climatological position and 1.6 degrees south of the previous dekads position. This dekad marked a sharp southward advance of the ITF across West Africa despite the fact that it remained to the north of the climatological position from 5W-5E, resulting in above average rain in Mali. The mean eastern portion of the ITF (20E-35E) was

located approximately at 15.1N, 0.4 degrees south of the mean climatological position. This was the first time to have the ITF located south of the mean climatological position since early July. Map 2 below shows the ITF position relative to its long-term average position during the second dekad of September and its previous position during the first dekad of September.

During the first dekad of September 1-10, 2013, the ITF continued to move north of climatology average across West Africa while it remained close to its climatological position over eastern Africa.

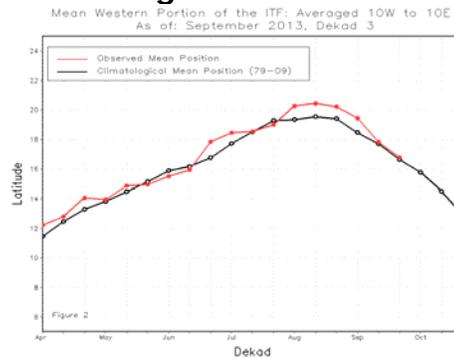


The mean western portion of the ITF (10W-10E) was located approximately 19.4N, 0.9 degrees north of the mean climatological position. This marked the 4th consecutive dekads where the western portion of the Front was nearly 1 degree north of the average position resulting in above to above average rains across the Sahel during the past thirty days. The mean eastern portion of the ITF (20E-35E) was located approximately 16.3N, 0.2 degrees north of the mean climatological position. Over eastern Africa, the Front progressed southward during the last three dekads, resulting in near average rainfall.



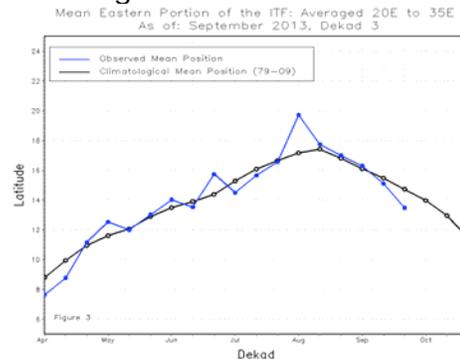
Map 3 above shows the position of the Front relative to its long-term average position for the first dekad of September and position during the third dekad of August (NOAA, 9/2013).

Western Region



This and the below graph represent time series, displaying the mean latitudinal values of the western and eastern portion of the ITF, respectively, and their evolutions since April, 2013 (NOAA).

Eastern Region



In the **NSE** outbreak areas, dry and hot weather conditions prevailed, but significant

rains were recorded in Kaliua near Malagarasi Basin and at Masenge near Wembere plains in Tanzania. Rainfall was also reported in the Buzi-Gorongosa and Dimba plains in Mozambique and likely created conditions for breeding (IRLCO-CSA).

Madagascar: Dry weather persisted in the outbreak and invasion areas. However, green vegetation may be present in some places including Mandabe, Manja Befandriana South, Horombe Plateau, Belomotra, Ankazoabo, Bero-roha, etc. Earlier, grass /brush burning was reported in various areas, including Mandoto, Miandrivazo Mandabe, Manja and Befandriana South causing locusts to migrate out of these areas. With the rainy season on the horizon, breeding could soon begin in the primary breeding areas.

No update was received in **Central Asia and Caucasus (CAC)** at the time this report was compiled, however, it is likely that the temperature has begun gradually dropping and the vegetation dried or drying up. Rains that persisted through the second half of July in Georgia had tapered off by August and ended in September (FAO-ECLO).

Note: *Changes in the weather patterns contribute to ecological shift in ETOP habitats and can increase the risk of pest outbreaks and resurgence as well as emergence of new pests. Regular monitoring and reporting of anomalous manifestations in habitats and pest situation remain essential. End note.*

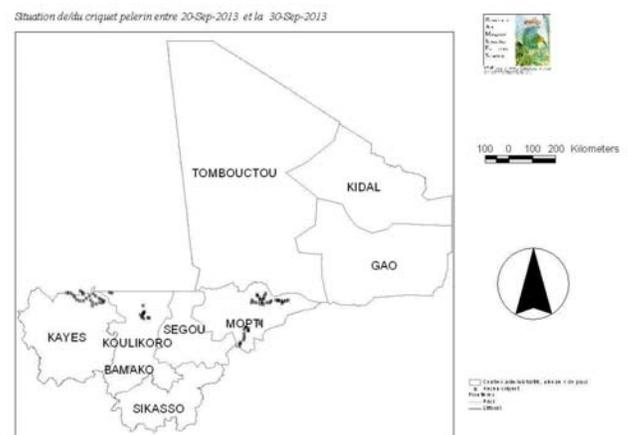
SGR - Western Outbreak Region:

The SGR situation remained relatively calm in **Sahel West Africa** and **North Africa** and only a few small-scale breeding were reported in Mauritania, Niger and Chad in September.

In **Mauritania**, scattered low density mature and immature adults mixed with low density mature adults and hoppers were observed,

but overall the situation remained calm despite favorable conditions that persisted due to heavy rains during this month.

The situation in northern **Mali** (Tombouctou, Kidal and Gao regions) where surveys were undermined by the ongoing insecurity situation is still unclear, but is likely similar to that of Northern Niger. In the western and central parts of the country where surveys were carried out in Kayes, Koulikoro and Mopti regions locusts were not detected during the last dekad of September although ecological conditions were favorable (CNLA/Mali).



Locust situation in Mali during the 3rd dekad of September, CNLA/Mali, 10/2013)

In **Chad**, the SGR situation remained generally calm. Only low density 2nd and 5th instar hoppers (700/ha) mixed with solitary adults (65-700i/ha) were detected near Salal (14°50'N/17°12'E) in Kanem and Fada (17°15'N/21°31'E) in Ennedi. Four ground teams continued survey operations in 1) the Lake Region and in Salal in Kanem Region, 2) in Fada, Eastern Ennedi region, 3) in Kalait Western Ennedi Region and 4) in Batha, Wadi Fira and Ouaddai. Aerial survey team is covering four air bases in Abéché, Fada, Faya and Salal (CNLA/Chad).

In **Morocco** ecological conditions were unfavorable in locust breeding areas and no

locusts were reported during this month. No locusts were reported in **Algeria** during this period (CNLAA/Morocco, FAO-DLIS, INPV/Algeria).

Forecast: As the ITF begins retreating southwards and the rains taper off, vegetation will continue drying up and force locusts to concentrate in patches of green vegetation and form groups and likely breed in small scale in Sahel West Africa during the forecast period. **Chad, Niger, Mali** and parts of the summer breeding in **Mauritania** may experience small-scale breeding. In **Algeria**, small scale breeding may occur in the south in areas adjacent to northern Niger and Mali, but significant developments are not expected. Other countries in the region will remain relatively calm during the forecast period (CNLA/Chad, CNLA/Mali, CNLA/Mauritania, CNLAA/Morocco, FAO-DLIS).



(Locust situation in September, FAO-DLIS, 10/2013)

SGR (Desert Locust) - Central Outbreak Region:

The locust situation remained active in **Yemen** where hoppers and adults have formed groups and a few swarms were detected in the interior of the country in September. Control operations treated only 5,000 ha during this time due to the insecurity situation and resentments from beekeepers that are fearful of pesticide poisoning their hives. Most of the locust populations were located near Marib and Bayhan and some are also present in isolated areas north of Wadi Hadhramaut and between Al Abr, Hazar and Thamud (the 2007 locust outbreak that invaded the Horn of Africa started here).

Hopper groups and bands were reported on the central Red Sea coasts of **Saudi Arabia** and low numbers of solitary adults were detected in the summer breeding areas between the Nile River and the Red Sea hills in **Sudan**. Scattered solitary mature adults were reported in the Afar Region in eastern **Ethiopia**. No locusts were reported in Eritrea, Somalia, Djibouti or Kenya during this period (AELGA, DLCO-EA, FAO-DLIS).

Forecast: As vegetation dries up, locusts will begin moving from the interior of **Yemen** to the coastal plains along the Gulf of Aden and the Red Sea. There is also a risk of locusts riding the northerly winds and crossing the Gulf of Aden and reach northern **Somalia** and perhaps adjacent areas of eastern **Ethiopia**. Efforts should be made to maintain survey and control operations in **Yemen**. Neighboring countries should be on the watch out. In Sudan adults will likely move from the summer breeding in the interior of the country to the Red Sea coast and begin breeding with the onset of the rains during the forecast period. Other countries in the region will remain relatively calm during the forecast period (DLCC/Yemen, DLCO-EA, FAO-DLIS, PPD/Oman, PPD/Sudan).

SGR - Eastern Outbreak Region: The situation remained calm in the eastern outbreak regions and only a few isolated adults were observed in the summer breeding areas along the Indo-Pakistan borders (DPPQS/India, FAO-DLIS).

Forecast: The Indo-Pakistan borders will likely remain calm during the forecast period (DPPQS/India, FAO-DLIS).

*In July, 2013, the Directorate for Plant Protection, Quarantine and Storage (DPPQS) in **India** established locust control rooms in the SGR circle for local farmers to report*

locust sightings to DPPQS staff. This approach is aimed at improving locust monitoring and reporting by DPPQS staff.

Red (Nomadic) Locust (NSE): NSE swarms and concentrations persisted in the Lake Chilwa/Lake Chiuta plains in Malawi and in the Ikuu-Katavi plains in Tanzania in September. If left uncontrolled the locusts will likely breed and form swarms that could cause damage to cropping areas. Low density scattered populations were detected in Malagarasi Basin and Wembere plains in Tanzania, Buzi-Gorongosa and Dimba plains in Mozambique as well as Kafue flats in Zambia where good rains fell. Locust may have begun mating. Active surveillance and monitoring remain essential (AELGA, IRLCO-CSA).

Forecast: NSE breeding will commence in the outbreak areas following the seasonal rainfall from October. Large-scale breeding is expected in Ikuu-Katavi, Malagarasi Basin and Wembere plains where considerable parental populations prevailed. Lake Chilwa/Lake and Chiuta plains in Malawi are likely to experience large-scale breeding in early 2014 and locusts may migrate to cropping areas and cause crop damage and impact food security in the region. Large-scale breeding is also expected in Buzi-Gorongosa and Dimba plains in Mozambique and in Kafue Flats in Zambia (AELGA, IRLCO-CSA).

Madagascar Migratory Locust (LMC) and Red (Nomadic) Locust (NSE):

With the vegetation drying up and following the prevailing southerly wind trajectory swarms were forced to move from the southwest outbreak areas and move towards the western and northeastern invasion areas. Swarm sightings and maize and rice damages were reported in Soavinandriana, Maintirano, Tsiroanomandidy and

Faratsiho areas during September. Egg laying was reported in Ranohira and Vavalovo in the central part of the outbreak area.

Malagasy Locust Campaign:

The 2013-2016 locust campaign was officially launched on September 20 and aerial survey began last week. Surveys will be assessing the overall locust situation, identify and map areas of main locust populations and determine localities to establish aerial bases for control operations. FAO is working with relevant host country ministries, partners and the private sector in the launching of the locust campaign. Technical specialists and experts are fielded/being fielded and more are recruited (FAO-ECLO).

Contributions:

FAO reported that as of the third dekad of September, it has received USD 23.1 million from donors and international organizations (this does not include market value of the 230,000 l of pesticides donated by Morocco and Mauritania and 45,000 l pledged by Senegal and Algeria) (AELGA, FAO/LWU).

On October 2nd, Morocco airlifted 64,000 l of the pesticides to Madagascar and an additional 136,000 l will be shipped soon and is expected to arrive in the country in the next months. Mauritania has announced a donation of 30,000 l to Madagascar (the value of the pesticides donated by Morocco and Mauritania are estimated at USD 1.4 to 2 million). Algeria and Senegal have also agreed to

donate 30,000 and 15,000 l of pesticides. It is worth noting that FAO is negotiating and coordinating the donations through triangulation (see list of acronyms on page 13 for definition) and arranges for transportation (AELGA, CNLAA/Morocco, CNLA/Mauritania, DPV/Senegal, INPV/Algeria)FAO/LWU).

Forecast: Breeding and hatching are expected to begin at the onset of the seasonal rains which should start sometime in late October/early November. Vigilance, timely reporting and preventive interventions remain crucial.

Moroccan (DMA), Italian (CIT) and Migratory (LMI) locusts in Central Asia and the Caucasus (CAC): A late received report indicated that, for the most part, locust operations have ended in the CAC. Only 1,000 ha and 112,000 ha were treated in Armenia and the Russian Federation, respectively during August and no operations or locust activities were reported in the region in September (FAO-ECLO).



(Locust prone CAC countries, FAO)

Forecast: As a result of large-scale control operations and coupled with the change in weather conditions, locust activities have continued disappearing in the CAC region and no activities are

expected during the forecast period (AELGA, FAO-ECLO).

Tree Locust (*Anacridium sp.*): Tree locust outbreaks which were reported affecting Acacia trees were controlled in 7,500 ha in Turkana County in Kenya. MoA/Kenya provided 10 million Kenyan Shillings for the control operations and DLCO-EA aircraft carried out spray operations (IRLCO-CSA).

Timor and South Pacific: No update was received in Timor and South Pacific in September (AELGA).

African Armyworm (AAW): AAW outbreaks were not reported in DLCO-EA or IRLCO-CSA member countries in September (AELGA, DLCO-EA, IRLCO-CSA).

Forecast: Armyworm outbreaks will likely begin at the onset of the seasonal rains from late October on. Kenya and Tanzania may experience early invasions associated with the short rains. National Forecasting Services and trap operators are advised to ready pheromone traps to monitor moth presence and report (AELGA, DLCO-EA, IRLCO-CSA).

NOTE: It is worth noting that the first seasonal AAW outbreaks in Ethiopia were detected and reported by farmers' forecasters who were trained and equipped by DLCO-EA with the support of OFDA-sponsored as part of the community-based armyworm monitoring, forecasting and early warning (CBAMFEW) project. The farmer forecasters issued an alert to farmers in Fedis, Babilay and the surrounding Woredas (districts) on a possible AAW outbreak prior to reporting the situation to the regional agricultural offices. The occurrence of the outbreaks vindicated the relevance of the CBAMFEW program and earned the forecasters trust among the farming communities and other partners. **END NOTE.**

Quelea (QU): QU bird outbreaks occurred in Siaya, Busia and Kisumu counties in September where six roosts were controlled. Two roosts were also controlled using Varnish, an experimental formulation containing fenthion active ingredient. Control operations were in progress at the time this report was compiled. QU was also reported causing damage to maturing wheat in East and West Mashonaland where the Department of National Parks and Plant Protection Research Institute of the Ministry of Agriculture, Mechanisation and Irrigation Development launched control operations. No major QU activities were reported elsewhere during this period (DLCO-EA, IRLCO-CSA).

Forecast: QU activities will diminish in Zimbabwe as irrigated cereal crops will be harvested, but may continue in Kenya for a while before the birds enter into breeding cycle. Active surveillance and timely reporting and interventions remain essential (DLCO-EA, IRLCO-CSA).

Facts: *QQU birds can travel ~ 100 km/day looking for food. An adult QQU bird can consume 3-5 g of grain and perhaps destroy the same amount each day. A QQU colony can contain a million birds (very common) and is capable of consuming and destroying 6,000 to 10,000 kg of seeds/day, enough to feed 12,000-20,000 people for a day.*

Rodents: No reports of rodent outbreaks were received during September. However, rodents remain a constant threat to cereal and other produces in many outbreak and invasion areas, and required regular surveillance and preventive interventions remain essential (AELGA).

Note: *Several predatory raptor birds, such as barn owl, Tyto Alba and other animals are known nature's biological control agents that contribute to maintaining the balance between moderate rodent outbreaks and a period of lull. End note.*

Front-line countries are encouraged and advised to remain vigilant. Invasion countries are cautioned to maintain the capacity to monitor and avoid any unexpected surprises. DLCO-EA, IRLCO-CSA, national PPDs, CNLAs, DPVs, ELOs, and others are encouraged to continue sharing with partners and stakeholders the valuable information they obtain from the field through various means as often as possible. Lead farmers and community forecasters are encouraged to remain vigilance and report any ETOP sightings to field agents and other contact persons.

Inventories of National Stocks of Acridid Pesticides

Pesticide inventories did not change much during September as a result of the absence of any major ETOP operations in frontline countries except the 5,000 ha treated in Yemen during September (see table below).

Note: It is worth mentioning that some of the inventories shown below are not necessarily current, as many countries tend to draw down their inventories for controlling other agricultural pests and often report late or rarely. **End note.**

Mindful of the risk of pesticides gradually becoming obsolete once passed their shelf-life (usefulness) and posing serious health threats, ETOP-prone countries, particularly those with large inventories, but are less likely to use them within a reasonable time period, are encouraged to test their stocks regularly and determine whether they should use, retain, share or discard them immediately. OFDA through a cooperative agreement with FAO, assisted dozens of ETOP affected countries to streamline their pesticide inventories by installing a web-based tracking system – Pesticide Stock Management System (PSMS). Currently, PSMS has been installed in several countries and become instrumental in assisting

countries monitor effectively and regulating their inventories. The System has enabled countries to identify stocks that require testing, put to an immediate use, shared or disposed.

OFDA/AELGA encourages exploring options that are proven safer and effective in preventing the risks they pose to human health hazards, environmental pollution, eliminating adverse effects to beneficial organisms and minimizing financial burdens associated with disposal of obsolete pesticide stocks. It promotes IPM at all times.

A judiciously executed triangulation of usable stocks from countries with large inventories to where they are much needed is a win-win situation worth considering.

During the June, 2013 CLCPRO technical and executive committee meetings, member countries agreed to maintain the spirit of sharing pesticides to during the control of SGR across national boundaries and beyond. This kind of solidarity is a good example of a win-win situation where by donating countries are not only assisting receiving countries, but also help themselves by avoiding a potential threat that unnecessary accumulations of obsolete pesticides could pose and also save resources that could be wasted otherwise in costly disposal operations.

Note: *The core message of sustainable Pesticide Stewardship Program is to strengthen the national and regional pesticide delivery systems by linking partners at different levels to help reduce pesticide related health risks as well as minimize and prevent environmental contamination, improve food security and ultimately contribute to the national and regional economy. **End note.***

Estimated quantities of pesticides available for ETOP operations in frontline countries

Country	Quantities l/kg ^{\$}
Algeria	1,190,090~
Chad	43,400
Eritrea	43,700~
Egypt	Data not available
Ethiopia	1,600~
Libya	25,000
Madagascar	Receiving donations, but current data not available,
Mali	32,000 D
Mauritania	155,400~*
Morocco	3,957,000~*
Niger	44,305~
Oman	20,000
Senegal	156,000~
Saudi Arabia	Data not available
Sudan	840.00~
Tunisia	167.6~
Yemen	27,820 + .527 kg GM~
^{\$} Include different kinds of pesticides in ULV, EC and dust formulations ~ data not current D = Mali donated 21,000 l for NSE in Malawi, Mozambique and Tanzania in 2012 and FAO facilitated the triangulation process and received 32,000 l from Morocco GM = <i>GreenMuscle</i> TM (fungal-based bio-sticide) • Morocco and Mauritania donated 200,000 l and 30,000 l to Madagascar in 2013	

LIST OF ACRONYMS

- AAW African armyworm (*Spodoptera expempta* - SEX)
- AELGA Assistance for Emergency Locust Grasshopper Abatement
- AFCS Armyworm Forecasting and Control Services, Tanzania

AfDB	African Development Bank	GM	Green Muscle (a fungal-based biopesticide)
AME	Anacridium melanorhodon		
APLC	Australian Plague Locust Commission	ha	hectare (= 10,000 sq. meters, about 2.471 acres)
APLC	Australian Plague Locust Commission		Integrated Regional Information Networks
CAC	Central Asia and the Caucasus	IRLCO-CSA	International Red Locust Control Organization for Central and Southern Africa
CBAMFEW	Community-based armyworm monitoring, forecasting and early warning	ITCZ	Inter-Tropical Convergence Zone
CERF	Central Emergency Response Fund	ITF	Inter-Tropical Convergence Front = ITCZ)
CIT	Calliptamus italicus	FAO-DLIS	Food and Agriculture Organizations' Desert Locust Information Service
CLCPRO	Commission de Lutte Contre le Criquet Pèlerin dans la Région Occidentale (Commission for the Desert Locust Control in the Western Region)	Hoppers	young, wingless locusts/grasshoppers (Latin synonym = nymphs or larvae)
CNLA/CNLAA	Centre National de Lutte Antiacridienne (National Locust Control Center)	Hopper bands	groups of hoppers aggregated and marching in unison and pretty much in the same direction
CRC	Commission for Controlling Desert Locust in the Central Region	Kg	Kilogram (~2.2 pound)
CTE	Chortoicetes terminifera	L	Liter (1.057 quarts or 0.264 gallon or 33.814 US fluid ounces)
DDLC	Department of Desert Locust Control	LMC	Locusta migratoriacapito
DL		LMM	Locusta migratoria migratorioides (African Migratory Locust)
DLCO-EA	Desert Locust Control Organization for Eastern Africa	LPA	Locustana pardalina
DMA	Dociostaurus maroccanus	MoAFSC	Ministry of Agriculture, Food Security and Cooperatives
DPPQS	Department of Plant Protection and Quarantine Services	MoARD	Ministry of Agriculture and Rural Development
DPV	Département Protection des Végétaux (Department of Plant Protection)	NOAA	National Oceanic and Aeronautic Administration
ELO	EMPRES Liaison Officers	NSD	Republic of North Sudan
EMPRES	Emergency Prevention System for Transboundary Animal and Plant Pests and Diseases	NSE	Nomadacris septemfasciata
ETOP	Emergency Transboundary Outbreak Pest	OFDA	Office of U.S. Foreign Disaster Assistance
Fledgling	immature adult locust /grasshopper that has pretty much the same phenology as mature adults, but lacks fully developed reproductive organs and hence cannot breed	PHD	Plant Health Directorate
		PHS	Plant Health Services, MoA Tanzania
		PPD	Plant Protection Department
		PPSD	Plant Protection Services Division/Department

PRRSN	<i>Pesticide Risk Reduction through Stewardship Network</i>
QQU	<i>Quelea quelea</i>
SARCOF	<i>Southern Africa Region Climate Outlook Forum</i>
SGR	<i>Schistoseca gregaria</i>
SWAC	<i>South West Asia DL Commission</i>
TAG	<i>Technical Assistance Group</i>
Triangulation (pesticide)	<i>The process whereby pesticides are donated by a country or countries with large inventories, but no immediate need to a country or countries with obvious and desperate needs and a third party takes on the negotiation role and assists with arranging shipments, etc. Usually FAO plays the third party role.</i>
USAID	<i>Unites States Agency for International Development</i>
UN	<i>the United Nations</i>
ZEL	<i>Zonocerus elegans, the elegant grasshopper</i>
ZVA	<i>Zonocerus variegatus, the variegated grasshopper; this insect is believed to be emerging as a fairly new distractive dry season pest, largely due to the clearing of its natural habitat through deforestation, i.e. land clearing for agricultural and other development efforts.</i>

http://transition.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/locust/

and

<http://www.usaid.gov/what-we-do/working-crises-and-conflict/responding-times-crisis/how-we-do-it/humanitarian-sectors/agriculture-and-food-security/pest-and-pesticide-monitoring>

Who to Contact:

If you have any questions, comments or suggestions, or know someone who would like to subscribe to this report, please, feel free to contact:
Yeneneh Belayneh: ybelayneh@usaid.gov

Tel.: + 1-202-712-1859

To learn more about our activities and programs, please, visit us at: