Emergency Transboundary Outbreak Pest (ETOP) Situation Report for September with a Forecast till mid-November, 2010

Summary

The **Desert Locust** (**SGR[1]**) situation remained relatively calm in September throughout summer breeding areas. Only small groups of mature swarms were controlled in 900 ha in Pakistan in the Gothki area near the Indian border. Scattered adults were reported in southern Mauritania, northern Mali, central Chad and central Sudan and small-scale breeding slightly increased locust numbers in some areas. Seasonal rains were winding down by end of September, but ecological conditions remained favorable in many summer breeding areas in the Sahel west Africa and along the Indo-Pakistan borders. No locusts were reported in other countries during this period (DDLC/Libya, DLCO-EA, DPPQS/India, DLMCC/Yemen, FAO-DLIS, INPV/Algeria, PPD/Ethiopia, PPD/Sudan)

Forecast: Adult locusts will move from southern Mauritania to the west and northwest of the country and form small groups. Locusts will also likely concentrate in patches of green vegetation in northern Mali and Niger and northeast Chad during the forecast period. Sudan will likely experience locust movements from the interior of the country to the winter breeding areas along the Red Sea coast. Small-scale breeding is likely in areas of recent rainfall on the Red Sea coastal plains, most notably on the coast in Tihama, Yemen. With monsoon rains ending in the summer breeding areas in Pakistan and India, locusts in Cholistan, Pakistan and Rajasthan, India will concentrate in areas of green vegetation along the borders. Active surveys and monitoring are essential to avoid any population build up and subsequent invasions. Other countries will likely remain calm during the forecast period (DDLC/Libya, DLCO-EA, DPPQS/India, FAO-DLIS, INPV/Algeria, PPD/Ethiopia, PPD/Sudan).

Other ETOPs

***Red Locust (NSE**): No update was received at the time this report was compiled, but a late received report indicated that the NSE situation remained calm in August and few concentrations may have formed in patches of green vegetation (IRLCO-CSA).*

Moroccan (DMA), **Italian (CIT)** and **Migratory (LMI)** locusts: No update was available for September at the time this report was compiled, but a late received report indicated that the locust situation remained relatively calm in August in all CAC countries and only less than 6,000 ha (nearly a tenth of areas treated in July) were sprayed against CIT in Armenia and Georgia in August. DMA disappeared after laying eggs and CIT was fledging in Armenia and laying eggs elsewhere. LMI completed its hopper development in Uzbekistan and started laying eggs in Kazakhstan in August. As of August, 2010, more than 3 million ha were sprayed against DMA, CIT and LMI

[1] *Definitions of all acronyms can be found on the last pages of this report.*

in the CAC region, excluding Afghanistan where a late received report indicated that more than 137,690 ha were sprayed during the 2010 control campaign (FAO-AGPP).

Madagascar Migratory Locust (LMC): Immature and mature swarms of the Malagasy migratory locust were reported dispersed north and northwest over the past months. Some were seen laying eggs. There is a likelihood of extensive breeding occurring during the upcoming breeding season. **Should that be the case, Madagascar will experience one of the most sever locust outbreaks in recent years and will be needing to launch large-scale control interventions through mid-2011.** The UN/FAO has issued an appeal to the international donors and responses are being anticipated. The United States Agency for International Development will be responding as part of its humanitarian assistance.

African Migratory Locust (LMM)

Adult LMM with a density of 2,5000-3,000 insects/ha were reported on some 50-80 ha in Berak northeast of Dire Dawa, Ethiopia. A similar situation was reported in Jiidale northwest Somalia. Ecological conditions are favorable and breeding will likely continue in these areas during the forecast period (DLCO-EA).

Armyworm (**SEX**): SEX activities were not reported in September and the situation will likely remain calm until after the onset of the rains when moths will begin appearing and laying eggs in the southern outbreak region (AELGA, DLCO-EA, IRLCO-CSA).

Quelea (QQU): DLCO-EA carried out aerial spraying between 31st August and 30th September against QQU birds in the Rift Valley Region in Kenya. More than 220 ha were sprayed during this time. The pest was seen feeding on irrigated crops. No reports were received elsewhere in the region (AELGA, DLCO-EA).

OFDA / AELGA (Assistance for Emergency Locust and Grasshopper Abatement**)** will continue monitoring ETOP situation in all regions and issue updates and advices as often as necessary. **End summary**

Progress in SGR Frontline Countries:

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

Funds provided by the African Development Bank, the World Bank, USAID, France, FAO, host-governments, neighboring countries and others enabled the FCs to equip CNLAs with necessary tools, materials and infrastructure as well as train staff and technicians to prevent and respond to DL outbreaks and invasions and avoid the threats they pose to vulnerable communities.

The overhaul of the CNLAs is all four countries is considered a significant improvement over the condition they were at during and prior to the 2003-05 upsurges. It is worth mentioning that the *CNLAs have been able to effectively avert a potentially devastating DL outbreak that began developing in **Mauritania** in 2009*.

OFDA ETOP Activities

- OFDA/TAG continues its initiatives in pesticide risk reduction through stewardship network (PRRSN) to help prevent pesticide related disasters and ensure safety of vulnerable people as well as protect their assets and the environment against pesticide pollution. OFDA/TAG has so far successfully launched two sub-regional PRRSNs in Eastern Africa and the Horn. Discussions are underway to launch similar initiatives in North Africa, Western Africa and the Middle East. Potential partners will be approached in Eastern Europe, Central Asia, the Caucuses as well as the LAC regions where OFDA/TAG intends to introduce similar initiatives.

- OFDA continues its support for capacity strengthening and pesticide disposal programs through FAO to mitigate, prevent and respond to DL emergencies and associated human health risks and environmental pollution.

- OFDA contributed to FAO's initiative to strengthen national and regional capacities in Central Asia and the Caucasus (CAC) to help coordinate locust monitoring, reporting as well as interventions among neighboring countries. The ultimate goal of the initiative is to prevent and mitigate locust threats and improve food security and livelihoods of vulnerable communities. OFDA will continue its support for these initiatives.

- USAID/Morocco, OFDA and USDA/FAS coordinated a study tour for a team of Moroccan locust experts and food safety and security specialists. The team visited US Department of Agriculture research centers and offices in Beltsville, Maryland, Sydney Montana, Phoenix Arizona, Greenbelt in Maryland, HQ,, University of Maryland at College Park, University of Wyoming in Laramie Wyoming as well as US Environmental Protection Agency and USAID offices. The delegation met with Virginia Tech via a video conferencing facility. The tour was sponsored by USAID/Morocco as part of a grant to the Kingdom of Morocco to improve agricultural activities and ran from 14-29 September, 2010. The six-member strong delegation was satisfied with its tour and was grateful to USAID/Morocco as well as all that hosted them.

Detailed accounts of ETOP situation and activities as well as ecological and weather conditions across various regions are presented below.

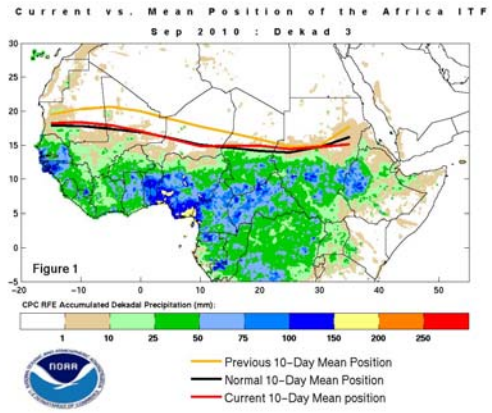
This SITREP and all previous ones can be accessed on our website:

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

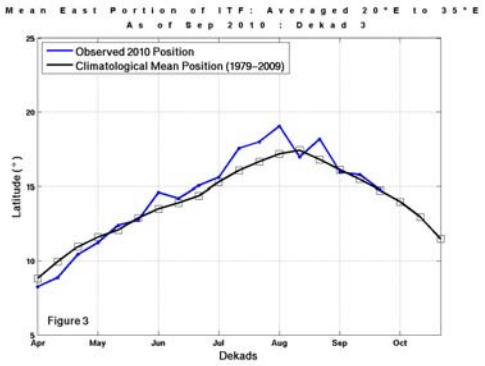
Weather and ecological conditions

During the last dekad of September, the Inter-Tropical Front (ITF) moved south towards its normal climatological position for West Africa with a mean position of 16.8N. This was far south of the positions it held over the past several dekads. This was due to weaker southerly winds across much of West Africa. In the eastern part, the Front was approximated at 14.8N (a near climatological position for this time of year)

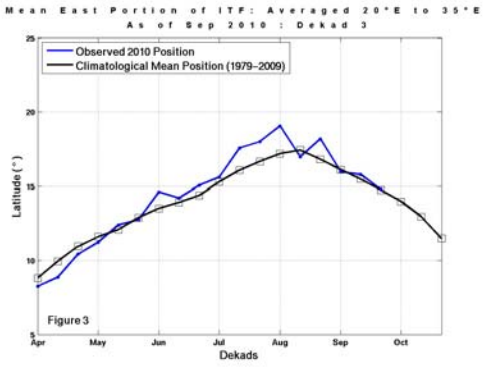
with the southward progression over eastern Africa (see map).



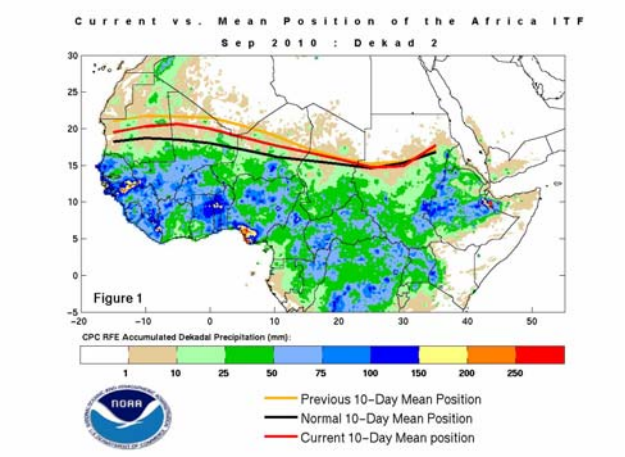
West Region



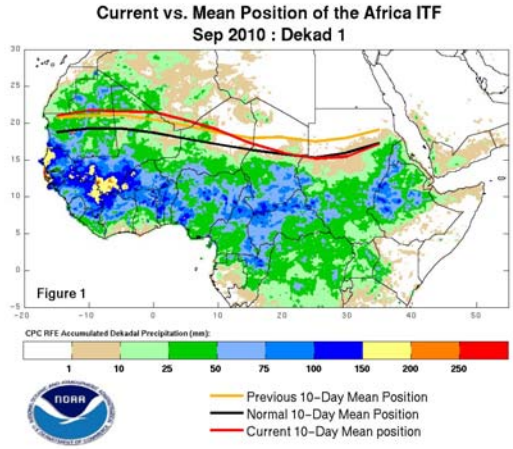
East Region



From September 11-20, 2010, the Front remained northward over many parts of West Africa while being close to the normal climatological position over much of the eastern Sahel region. The mean for the western portion was around19.5N, slightly south of the previous dekad but still north of the climatological average for mid-September resulting in abundant precipitation across much of Senegal and Guinea and western Mali. This was attributed to steady southerly winds. The mean eastern portion of the ITF was around 15.8N, south of its previous position (see map) (NOAA).



During the first dekad of the month, the Front remained north of the climatological average position near 20.9N over many parts of West Africa due to strong southerly winds from the Gulf of Guinea region into the central parts of Mali and Mauritania. The Front retreated southward over much of the eastern Sahel region with an average mean portion of 16.0N, a considerable retreat from its previous dekadal position.



Extended weather forecast for sub-Saharan Africa for the period covering September-November shows an increased chance for below average rainfall along the east coast of Kenya and part of southern Somalia. In Northern Horn of Africa, there is an

increased chance for above average rainfall over western Ethiopia and locally over southern Sudan. There is an increased chance for below average rainfall over southwestern Sudan, including portions of southern Darfur. During Dec-Feb, Southern Africa will likely experience localized above average rainfall over parts of northern Mozambique, southern Malawi, and parts of eastern South Africa. Northwestern Mozambique, central Malawi, and some areas over southern Mozambique and western South Africa will likely experience below average rainfall (NOAA). *Most of the CAC countries remained fairly hot and dry (FAO-AGPP).*

***Note**: Changes in the weather pattern and the shift in the ecology of landscape are believed to exacerbate the risk of pest outbreaks and resurgence. Regular monitoring and reporting are essential.* ***End note**.*

Detailed accounts of ETOP situations and activities

DL-SGR - Western Outbreak Region

The **Desert Locust** (**SGR):** SGR situation remained relatively calm in September throughout western summer breeding areas. Some scattered adults were present in southern Mauritania, northern Mali, and central Chad where small-scale breeding lead to a slight increase in locust numbers during this period. The rainy season started winding down in the summer breeding areas in the Sahel west Africa by the end of September, but ecological conditions remained favorable in many areas. No locusts were reported in other countries during this period (DDLC/Libya, FAO-DLIS, INPV/Algeria)

Forecast: Adult locusts will move from southern Mauritania to the west and northwest of the country and form small groups. Concentrations of locusts in patches of green vegetation will also be likely in northern Mali and Niger and northeast Chad. Small-scale breeding will likely continue and locust numbers could increase and form groups in areas of recent rainfall in Mauritania, and may be Mali, Niger and Chad. Other areas in the region will likely remain calm during the forecast period (DDLC/Libya, FAO-DLIS, and INPV/Algeria).

DL - Central Outbreak Region

Scattered solitary adult SGR were reported in central Sudan and low numbers of scattered immature adults and hoppers of SGR mixed with LMM and tree locusts were reported in the Somali region around Shinille, Aysha and Berak in Ethiopia where local crop protection staff carried out control operations against LMM in irrigated sorghum and grazing land. A similar situation was observed in northwestern Somalia where small groups of mixed populations of SGR and LMM were reported in Jiidale (N1041/E4739) during surveys carried out from 17-23 September. Hoppers and fledglings were reported in grassland and crop fields (DLCO-EA, FAO-DLIS, PPD/Ethiopia, PPD/Sudan).

Forecast: Adult locusts will likely move from the interior of Sudan towards the winter breeding areas along the Red Sea coast. Small-scale breeding is likely in areas of recent rainfall on the Red Sea coastal plains, most notably on the Tihama coast of Yemen. Other countries will likely remain calm during the forecast period. Routine survey and monitoring are essential to avoid any surprises (DLCO-EA, FAO-DLIS, AELGA, PPD/Ethiopia, PPD/Sudan).

DL- Eastern Outbreak Region

A mature Desert Locust swarm measuring 4 km by 3 km was detected on 15 September near the Indo-Pakistan border just a few

kilometers inside Pakistan in the Gothki area south of Rahimyar Khan and west of Jaisalmer**,** India**.** The locusts settled and were ready to lay eggs. Pakistani teams launched control operations and treated some 900 ha from 18-30 September. Surveys were intensified in adjacent border areas of Rajasthan in India (DPPQS/India, FAO-DLIS).

Forecast: As the monsoon rains end in the summer breeding areas in Pakistan and India, locusts in Cholistan, Pakistan and Rajasthan, India will likely concentrate in areas of green vegetation primarily along the borders. Unless more rains fall, vegetation will start to dry out and scattered locusts will likely concentrate in patches of green vegetation for form groups. Active surveys and monitoring are essential to avoid any population build up and subsequent invasions (DPPQS/India, FAO-DLIS).

Scattered adults in the summer breeding areas, FAO-DLIS, 10/10)

Red Locust (NSE): *No update was received at the time this report was compiled, but a late received August report indicated that the NSE situation remained calm in August and few concentrations may have formed in patches of green vegetation (IRLCO-CSA).*

Forecast: Concentrations of adult locusts will likely continue and form small groups. Egg laying will likely commence during the forecast period in areas where floods have receded (AELGA).

Madagascar Migratory Locust (LMC): A number of immature and mature swarms of the Malagasy migratory locust were reported dispersed north and northwest over the past months. Some were seen laying eggs. Immature swarms were also reported in areas close to the Capital City.

With the spring forecast predicting above average precipitation and warm weather, there is a likelihood of extensive breeding occurring during the upcoming breeding season which commences sometime in November. Should that be the case, Madagascar will likely experience one of the most sever locust outbreaks in recent years and will be needing to launch large-scale control interventions through mid-2011.

FAO, in collaboration with the National Locust Control Center (CNA), has put together a strategic action plan and continued contacts with various agencies in the host-government and development partners. It has deployed a campaign coordinator, logisticians, an cardiologist and other technical staff to develop campaign plans, explore resources, conduct aerial survey and assess the situation in collaboration with CNA and other partners. Aerial surveys will continue and control intervention will commence as soon as hoppers begin appearing from November on.

FAO has issued an appeal to the international donors on behalf of the Government of Madagascar and responses are being anticipated. The US Agency for International Development is considering a response as part of its humanitarian assistance and it is anticipated that others will do the same.

Forecast: Given the moist and warm spring forecast, ecological conditions will likely be favorable for locusts to breed and develop in large numbers during the upcoming breeding season following the onset of the spring

rains in October/November. Should that be the case, the country will experience one of the most sever locust outbreaks in recent years and will be needing considerable amount of resources to launch large-scale control interventions through mid-2011.

CNA and DPV must remain vigilant and continue monitoring areas where egg laying is believed to have occurred or will likely occur and report and respond to any intervention activities as rapidly as possible.

OFDA/TAG will continue monitoring the situation in collaboration with FAO, CNA and other partners and issue updates and provide advice.

African Migratory Locust (LMM)

Small-scale breeding of LMM was reported in eastern Ethiopia and northwestern Somalia. Adult locust with a density of 2,500-3,000 insects/ha were reported on some 50-80 ha in Berak (0919N/04203E) 27 km (17 m) northeast of Dire Dawa, in eastern Ethiopia. A similar situation was reported in Jiidale (N1041/E4739) northwest Somalia. Ecological conditions were favorable and further breeding could occur in these areas during the forecast period (DLCO-EA).

CAC - *DMA*, CIT and LMI: No update was available for September at the time this report was compiled, but a late received report indicated that the locust situation remained relatively calm in August in all CAC countries and only less than 6,000 ha (nearly a tenth of areas treated in July) were sprayed against CIT in Armenia and Georgia in August. DMA laid eggs and disappeared and CIT was fledging in Armenia and laying eggs elsewhere. LMI completed its hopper development in Uzbekistan and started laying eggs in Kazakhstan in August. As of August, 2010, more than 3 million ha were sprayed against DMA, CIT and LMI in the CAC region, excluding Afghanistan where more than 137,690 ha were sprayed during the 2010 control campaign (FAO-AGPP).

(map of locust prone CA countries, FAO)

Australian Plague Locust (APL): A widespread infestation of hoppers is developing in New South Wales, eastern South Australia and northern Victoria. Hatchings began in early September in northern New South Wales and in mid-September in South Australia, northern Victoria and western and central west New South Wales. By the end of September high density nymphs and hopper bands were recorded in Central West, Western, New South Wales, Northeast, South Australia and Northwest Victoria.

Forecast: Hatchings and widespread development of high density hoppers and bands will continue and infest vast areas in the New South Wales and North Central Victoria. Fledglings and swarms will follow from late October to late November in northern and then South Australia and Victoria and will likely affect several states and could continue into summer (APLC).

The Timor and South Pacific: No update was received in September on locusts or grasshoppers during this period.


(Australian plague locust, source: APLC)

Armyworm (**SEX**): SEX activities were not reported in September and the situation will likely remain calm until after the onset of the rains when moths will begin appearing and laying eggs in the southern outbreak region (AELGA, DLCO-EA, IRLCO-CSA).

Quelea (QQU): DLCO-EA carried out aerial spraying between 31st August and 30th September against QQU birds in the Rift Valley Region in Kenya. More than 220 ha were sprayed during this time. The pest was seen feeding on irrigated crops. No reports were received elsewhere in the region (AELGA, DLCO-EA).

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 colony composed of a million birds (very common) is capable of consuming and destroying 7-10 tons of seeds/day (enough to feed 15,000-20,000 people for a day).*


(A QQU roost, a file photo; free encyclopedia)

Rodents: No update was received at the time this report was compiled, but the pest remains a threat to both pre-harvest and post-harvest crops and produces. Barn owl, *Tyto alba and several other raptor birds and animals are known as nature's biological control of rodents.*

Front-line countries are advised to remain vigilant. Countries in the invasion zones should maintain the capacity to avoid any unexpected surprises. DLCO-EA, IRLCO-CSA, national PPDs, CNLAs, DPVs and ELOs are encouraged to continue sharing information with partners and other stakeholders as often as possible.

Acridid Pesticide Stocks

Control operations were only conducted against SGR in Pakistan and LMM in Ethiopia and pesticide inventory remained unchanged in all other countries during this period.

The likelihood of some of the pesticides listed in the below box becoming obsolete increases as time goes by. Mindful of this, ETOP-prone countries, particularly those with large stocks, are encouraged to regularly test their stocks and determine whether they should retain, use, share or discard them immediately. All options should be explored to avoid huge environmental and financial costs associated with obsolete pesticides. ***A judiciously executed triangulation of pesticides from countries with large stocks to those where the need exists due to imminent threats of ETOP outbreaks is a double-edged alternative that is worthwhile considering.***

Note: The core message of **pesticide stewardship [networking]** is to strengthen the national and regional pesticide delivery systems by linking partners at the national, regional and trans-regional levels and thereby reduce pesticide related health risks as well as avoid environmental pollution, improve food

security and ultimately contribute to the national economy. **End note**.

Country	Quantities in l/kg[$]
Algeria	1,800,000~
Chad	108,085~
Eritrea	44,800~
Ethiopia	17,280
Libya	Data not available
Mali	209,000%~
Mauritania	480,000~@
Morocco	4,104,997~
Niger	28,240+
Senegal	519,000~
Saudi Arabia	Date not available
Sudan	880,964"
Tunisia	167,600~
Yemen	40,500 + 527 kg GM

$These quantities include ULV, EC and dust formulations
~ data not necessarily current
% Mali donated 21,000 l for RL in Malawi, Mozambique and Tanzania late last year and FAO facilitated the triangulation
+ quantity reported in Agadez left-over stocks of Chlopyrifos from the 2003-DL campaign was tested for quality and found to be usable through 2012
[m] This includes EC, ULV and Dust for all crop protection uses
GM = GreenMuscle

List of Acronyms

AELGA	*Assistance for Emergency Locust Grasshopper Abatement*
AME	*Anacridium melanorhodon*
APL	*Australian Plague Locust*
APLC	*Australian Plague Locust Commission*
CAC	*Central Asia and the Caucasus*
CERF	*Central Emergency Response Fund*
CIT	*Calliptamus italicus*
CLCPRO	*Commission de Lutte Contre le Criquet Pélerin dans la Région Occidentale (Commission for the Desert Locust Control in the Western Region)*
CNLA/CNLAA	*Centre National de Lutte Antiacridienne (National Locust Control Center)*
CRC	*Commission for Controlling Desert Locust in the Central Region*
CTE	*Chortoicetes terminifera*
DDLC	*Department of Desert Locust Control*
DL	*Desert Locust*
DLCO-EA	*Desert Locust Control Organization for Eastern Africa*
DMA	*Dociostaurus maroccanus*
DPPQS	*Department of Plant Protection and Quarantine Services*
DPV	*Département Protection des Végétaux (Department of Plant Protection)*
ELO	*EMPRES Liaison Officers*
EMPRES	*Emergency Prevention System for Transboundary Animal and Plant Pests and Diseases*
ETOP	*Emergency Transboundary Outbreak Pest*
ha	*hectare (= 10,000 sq. meters)*
IRIN	*Integrated Regional Information Networks*
IRLCO-CSA	*International Red Locust Control Organization for Central and Southern Africa*
ITCZ	*Inter-Tropical Convergence Zone*
ITF	*Inter-Tropical Convergence Front = ITCZ)*
FAO-DLIS	*Food and Agriculture Organizations' Desert Locust Information Service*
Kg	*Kilogram (~2.2 pound)*
L	*Liter (1.057 quarts or 0.264 gallon or 33.814 US fluid ounces)*
LMC	*Locusta migratoriacapito*

LMM	*Locusta migratoria migratorioides (African Migratory Locust)*
LPA	*Locustana pardalina*
MoAFSC	*Ministry of Agriculture, Food Security and Cooperatives*
MoARD	*Ministry of Agriculture and Rural Development*
NOAA	*National Oceanic and Aeronautic Administration*
NSE	*Nomadacris septemfasciata*
OFDA	*Office of U.S. Foreign Disaster Assistance*
PHD?S	*Plant Health Directorate/ Services*
PPD	*Plant Protection Department*
PPSD	*Plant Protection Services Division/Department*
PRRSN	*Pesticide Risk Reduction through Stewardship Network*
QQU	*Quelea quelea*
SEX	*Spodoptera exempta*
SGR	*Schistoseca gregaria*
SWAC	*South West Asia DL Commission*
TAG	*Technical Assistance Group*
USAID	*Unites States Agency for International Development*
UN	*the United Nations*

To learn more about our activities and the programs we support, please, visit our website at:

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

Point of Contact:

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