

**Emergency Transboundary
Outbreak Pest (ETOP) Situation
Report for April with a Forecast
till mid-June, 2012**

Summary

The Desert Locust (*SGR*¹) situation continued developing and *second generation hoppers from eggs laid in late February were seen in April in northwest of Ghat in Libya and southeast Algeria*. As of the third dekad of April, ground teams treated more than 3,545 ha in Libya and close to 3,360 ha in Algeria, respectively. Extensive areas may have been infested in other area, but could not be verified due to insecurity and remoteness.

Breeding may have been in progress in northern Niger and northern Mali, but could not be verified due to the security problems. Some hoppers and immature adults were seen in central western and coastal areas in Oman where breeding was reported in March. Mature adults were detected in the southwestern coast in Pakistan. No locusts were reported in Yemen, Egypt, Sudan, Eritrea, Ethiopia, Somalia, Yemen, Saudi Arabia or southeastern Iran or along the Indo-Pakistan borders during this period (DDLCO/Libya, DLCO-EA, DPPQS/ India, FAO-DLIS, INPV/Algeria).

Forecast: Locust will continue developing form swarms by mid-June

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

along southwestern Libya and southeastern Algeria borders. By late June to early July, swarms will likely begin moving to northern Sahel and if so, this will further complicate a situation that is already precarious. Small-scale breeding could commence in northern Oman and perhaps in Yemen, Mauritania, southwestern Morocco and western coast of Pakistan and southeastern Iran if additional rains fall during the forecast period. Other countries will remain fairly calm during the forecast period. Survey, monitoring and preventive interventions should be implemented to the extent possible to minimize significant migrations (DDLCO/Libya, DLCO-EA, DPPQS/India, FAO-DLIS, INPV/Algeria).



(Hoppers and groups in Libya and Algeria, FAO-DLIS, 5/2012)

OFDA will continue monitoring the situation and advise as necessary.

Other ETOPs

Red (Nomadic) Locust (NSE): 73 swarms and 69 concentrations of NSE were detected in April in 9,000 ha in Ikuu-Katavi plains during surveys conducted by the International Red Locust Control Organization for Central and Southern Africa (IRLCO-CSA) in collaboration with the Tanzania Ministry of Agriculture, Food Security and Cooperatives (MAFSC). Only limited control was undertaken by IRLCO-

CSA, but large areas still need to be treated. Swarms persisted in Malawi and low density populations were detected in Kafue Flats in Zambia (IRLCO-CSA).

Forecast: Swarms will likely continue escaping from Ikuu-Katavi plains and move into adjacent areas in Tanzania and perhaps proceed to other countries. Grass burning which will start in the foot hills of the dry season will intensify swarm formations. IRLCO-CSA is mobilizing resources and seeking assistance from development partners to conduct large-scale control operations and minimize the threat to food security and livelihoods of vulnerable populations (IRLCO-CSA).

Madagascar Migratory Locust (LMC): No update was received on LMC or NSE in Madagascar at the time this report was compiled, but swarms and groups are expected to have continued forming and perhaps laying eggs in several places. Aerial surveys and control interventions that commenced early last month are in progress. FAO is working with partners in West Africa on triangulating pesticides to Madagascar (AELGA, FAO-ECLO, FAO-CNA).

Forecast: Locusts will likely continue further developing during the forecast period in areas where good rains fell over the past months. Vigilance and timely interventions are essential to avert any major threats to agriculture and food security. USAID/OFDA will continue closely monitoring the situation through AELGA project as well as other means (AELGA, FAO-CNA).

Note: *The cost of the 2011-2012 Madagascar locust campaign was estimated at USD 7.2 million. So far, cash and in-kind contributions and pledges from UN/OCHA, IFAD, AfDB, EU, UNDP, France, and the Government of Madagascar amount to cover roughly half the estimated needs. An FAO-MoA meeting on the locust situation took place on April 18, 2012, but further detail was not available at the time this report was compiled (FAO-ECLO). **End note.***

Moroccan (DMA), Italian (CIT) and Migratory (LMI) locusts in Central Asia and the Caucasus (CAC): No update was received at the time this report was compiled, but eggs that were laid last fall may have begun hatching or will soon start to hatch in places where the weather condition has improved. If so, hoppers and bands may be seen during the forecast period (AELGA).

African Armyworm (AAW): AAW situation remained relatively calm in April and only some trap catches were reported in Mbeya in Tanzania (DLCO-EA, IRLCO-CSA, and PHS/Tanzania).

Forecast: AAW activities will likely commence in Kenya and perhaps southern Ethiopia, but other countries will likely remain calm during the forecast period (AELGA, DLCO-EA, and IRLCO-CSA).

Quelea (QQU): DLCO-EA aircrafts controlled QQU birds in Dodoma, Mwanza and Singida regions in Tanzania and in Mweia County and Nyanza Province in Kenya in April. The birds were seen attacking rice, millet and sorghum crops in Tanzania and rice crops in Kenya. Six roosts were identified in Gaza Province in Mozambique. Control operations were under

preparation in Kenya and Mozambique at the time this report was compiled (AELGA, DLCO-EA, IRLCO-CSA).

Forecast: QQU birds will likely continue being a problem to small grain producers in Kenya, Tanzania, Mozambique and Zimbabwe during the forecast period. Vigilance is required (AELGA, DLCO-EA, IRLCO-CSA).

OFDA/AELGA (Assistance for Emergency Locust and Grasshopper Abatement) will continue closely monitoring ETOP situations 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 DL activities.

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

CNLAs' efforts to avert mitigate or respond to potentially devastating SGR outbreaks and invasions deserve support and encouragements – a good

example of **sustainable disaster risk reduction** with modest input.

OFDA ETOP Activities and Impacts

- OFDA/TAG continues its initiatives in pesticide risk reduction through stewardship network (PRRSN) programs to ensure safety of vulnerable people and protect their assets and the shared environment against pesticide pollution. OFDA/TAG successfully launched two sub-regional PRRSNs in Eastern Africa and the Horn. The Horn of Africa PRRSN initiative has created a sub-set Association in Ethiopia (PSA-E).
- Discussions that began several months ago to launch similar PRR initiatives in North Africa and the Middle East were halted by the unrests that occurred in the regions. A dialogue is underway in other regions and will also resume soon in the regions mentioned above.
- OFDA continued its assistance for DRR through FAO capacity strengthening programs to mitigate, prevent, and respond to and reduce risks of ETOP emergencies and associated human health risks and environmental pollution.
- OFDA's modest assistance for obsolete pesticide prevention and management has enabled FAO to develop a dynamic system (PSMS) for monitoring, managing and reporting pesticide inventories in ETOP prone countries. This has enabled countries to launch regular monitoring and make decisions concerning their stocks and ultimately, prevent accumulation of obsolete stocks.
- With the assistance that USAID/ OFDA, African Development Bank, France, the

World Bank, and other donors provided through FAO to strengthen host-country and regional capacities, a number of countries have been able to respond to in time and avert potentially devastating locust outbreaks and upsurges. During 2006-2010, Mauritania and Niger were able to stop four (4) potentially devastating locust outbreaks that could have caused significant crop and pasture losses if left unattended.

- For the first time, OFDA is supporting a program through FAO to strengthen national and regional capacities in Central Asia and the Caucasus (CAC) to coordinate locust monitoring and reporting as well as plan prevention and mitigation efforts to abate and minimize the threats they pose to food security and livelihoods of vulnerable populations.

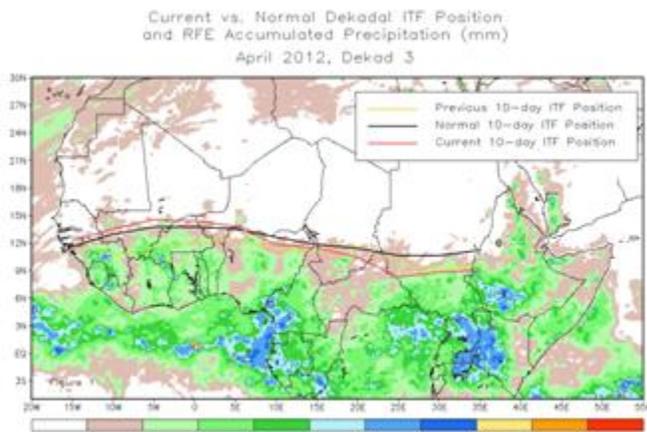
All SITREPs can be accessed on our website at: http://www.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/locust/

During the last week of April, local areas in southern Mali, southern South Sudan, portions of Ethiopia, eastern Uganda, western Kenya, northern Tanzania, northwestern Madagascar, and portions of South Africa received above average rainfall. Below average rainfall was observed in portions of Burkina Faso, parts of South Sudan Republic, Ethiopia, Somalia, and eastern Kenya. Parts of Zambia, eastern Namibia, local areas in Zimbabwe, parts of South Africa, Mozambique and much of Madagascar received above average rainfall during the first dekad of April.

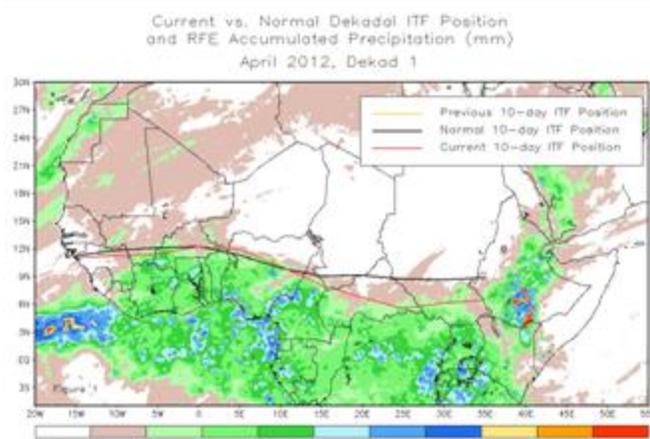
http://www.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/locust/

Weather and ecological conditions

During the third dekad of April, the Inter-Tropical Front (ITF) continued moving north over parts of Africa with the mean point of 13.6N in its western portion, an increase from its previous dekad position. This was associated with good rains across portions of Burkina Faso and southern Mali. The eastern portion of the ITF showed a mean position of around 9.1N, receding from its previous dekadal position and lower than the climatological position for late April (see Map, NOAA, 5/2012).



From 11-20 April, the Front moved further north across Africa. The eastern segment advanced to a mean position of 10.1N slightly ahead of its climatological mean position by 0.2 degrees. The western portion moved around 11.6N, slightly north compared to the previous dekad, but almost a degree south of the climatological position for this period due to strong northerly winds that pushed back the Front (see map, NOAA, 4/2012). Below average rainfall was recorded across portions of western Burkina Faso, southern Tanzania, northeastern Kenya, Somalia, and in local areas in Ethiopia during this period. Below average rainfall was recorded over portions of South Sudan, parts of Ethiopia, much of Uganda, Kenya, southern Somalia, Tanzania, and local areas in Madagascar (NOAA).



Light to moderate rain fell in Bikaner and Jodhpur divisions in Rajasthan and in north Gujarat region, Saurashtra and Kutch during the second dekad of April. Hence, conditions will be favorable for locusts to start developing (DPPQS/India).

Note: Changes in weather patterns 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 situation, activities and ecological conditions are presented below.

SGR - Western Outbreak Region:

The SGR situation continued developing in April in northwest of Ghat in Libya extending west to Wadi Tarat and Illizi in Algeria and on the southern side of the Tassili-Ajjer Mountains west of Djanet in Algeria. Hatching, fledglings and group formations from the second generation eggs laid in late February were reported in areas where breeding conditions were favorable. New infestations were also detected north of Ghat on the eastern side of Jebel Idinin in Libya. Ground operations continued in both countries, but large areas that may have been infested are inaccessible due to remoteness and

insecurity. FAO is providing additional assistance to Libya where the capacity to launch extensive survey and control operations was affected by the recent insurrection. As of the third dekad of April, ground teams treated more than 3,545 ha in Libya and close to 3,360 ha in Algeria. The Air Mountains in northern Niger and northern Mali where small-scale breeding may have been in progress remained inaccessible due to security problems (DDLC/Libya, FAO-DLIS, INPV/Algeria).



(Locust numbers are expected to increase in April from new hatchings, FAO-DLIS, 4/2012)

Forecast: Locusts that continue forming in southwestern Libya and southeastern Algeria will mature by mid-May and begin laying eggs by June and form the third generation groups. Third generation swarms will likely form and begin moving south in July and reach northern Sahel (Mali and Niger) and coincide with the summer rains. If so, the situation that is already precarious could be further deteriorate with locust threatening crops and pasture. Mauritania and Southwestern Morocco could also see small-scale breeding (AELGA, DDLC/Libya, FAO-DLIS, INPV/Algeria).

SGR - Central Outbreak Region: Hoppers and immature adults were seen in April in central western and coastal areas in Oman where breeding was reported in March. No locusts were reported in Yemen, Egypt, Sudan, Eritrea, Ethiopia, Somalia, Yemen or Saudi Arabia during this period (DLCO-EA, FAO-DLIS).

Forecast: Small-scale breeding could commence in areas of recent rainfall in northern

Oman and perhaps in Yemen provided additional rains fall during the forecast period. The northwestern plateau in Somalia will likely see some adults, but overall the situation will remain calm in other countries during the forecast period (DLCO-EA, FAO-DLIS).

SGR - Eastern Outbreak Region: Mature adult locusts were detected during the first fortnight of April in the southwestern coast in Pakistan, but no locusts were reported in southeastern Iran during a joint border survey carried out. No locusts were seen along the Indo-Pakistan borders during this period although rainfall was reported in these regions (DPPQS/India, FAO-DLIS).

Forecast: Small-scale breeding could begin in spring breeding areas in western coast of Pakistan and southeastern Iran if additional rains fall, but significant developments are not expected during the forecast period (DPPQS/India, FAO-DLIS).

Red (Nomadic) Locust (NSE): The NSE situation in Tanzania continued being a threat. During surveys carried out by IRLCO-CSA and MAFSC, 73 swarms ranging in size from 0.5 to 200 ha and 69 concentrations ($8 > 40$ locust/m²) were detected in Ikuu-Katavi plains over 9,000 ha. The swarms pose a serious threat to an estimated 300,000 ha of cereal crops in western Tanzania. IRLCO-CSA carried out small-scale control in Ikuu-Katavi plains in late April, but large outbreak areas have yet to be treated. Survey operations continued in Wembere plains, Malagarasi Basin, North Rukwa plains and Bahi Valley in Tanzania to ascertain the level of control required. Swarms that were reported in March in Lake Chilwa/Lake Chuita Plains in Malawi persisted. Survey operations detected low density populations (5-15 locust/m²) on 300 ha in Kafue Flats in Zambia.

Forecast: Large-scale swarms will likely escape from the outbreak areas in Ikuu-Katavi plains in Tanzania where only limited control was carried out. Swarm formation will intensify with grass burning which will start by June in the foot hills of the dry season. In Lake Chiuta/Lake Chilwa plains of Malawi, where large swarms have persisted, plans are underway to launch control. In Kafue Flats in Zambia swarms will likely form and threaten irrigated crops. To address this locust emergency, IRLCO-CSA is mobilizing resources and seeking assistance from development partners to conduct large-scale control operation. IRLCO-CSA is calling on all concerned MoAs and personnel to remain vigilant and report immediately any locust sightings to IRLCO-CSA to facilitate appropriate action (IRLCO-EA).



(Red locust swarm in Ikuu Plain, Tanzania, 4/28/20120, IRLCO-CSA)

Madagascar Migratory Locust (LMC): No updates were received at the time this report was compiled, but swarms and bands are expected to have continued in several places. Aerial surveys and control interventions that commenced in the outbreak areas early last month should be in progress. FAO is working with partners in West Africa on launch pesticide triangulation² for Madagascar (AELGA, FAO-ECLO).

². Pesticide triangulation is a process by which a third party (for ETOPs it is usually FAO) starts negotiations with countries where excess inventory of pesticides are present and those that are in dire need. Often, countries with excess inventory donate

Forecast: LMC and NSE will likely continue developing during the forecast period in areas where good rains fell over the past months in the transient and central gregarization and multiplication zones. Vigilance, timely assessments and reporting as well as rapid interventions are essential to avert any major threats to agriculture and pasture. USAID/OFDA is closely monitoring the situation through AELGA project as well as other means.

Moroccan (DMA), Italian (CIT) and Migratory (LMI) locusts in Central Asia and the Caucasus (CAC): No update was received at the time this report was compiled, but eggs that were laid last fall may have begun hatching or will soon start to hatch in places where the weather condition has improved. Hoppers and bands may be seen during the forecast period (AELGA).



(Locust prone CAC countries, FAO)

Australian Plague Locust (APL): No update was received at the time this report was compiled.

certain quantities of their stocks or sell at a reduced price to the countries in need and FAO facilitates transportation. When planned and executed effectively, this option benefits both the donating country as well as the recipient. The mechanism has been tried several times and found viable for immediate pest control and to reduce the risk of obsolete pesticides as well as save costs and time.



(Australian plague locust, source: APLC)

Forecast: (APLC). The eggs that were laid from local populations from mid-March on and from redistributed adults will have diapaused till next spring. The population level is expected to remain low in New South Wales, Queensland and Victoria and no major agricultural risk is expected during this time (from APLC).

Timor and South Pacific: No update was received in April in Timor and South Pacific, but some activities are expected to have occurred during this period (AELGA).

African Armyworm (AAW): AAW outbreaks were not reported in April and the situation remained calm and only some trap catches reported in Mbeya in Tanzania (DLCO-EA, IRLCO-CSA, and PHS/Tanzania).

Forecast: AAW activities will likely commence in Kenya and perhaps in southern Ethiopia, but the situation will remain calm in Tanzania and other countries in the region during the forecast period. Trap operators and community forecasters are encouraged to continue monitoring and alert farmers and report to relevant authorities as needed (AELGA, DLCO-EA, and IRLCO-CSA).

Quelea (QQU): A DLCO-EA spray Aircraft carried out QQU bird control during the second dekad of April in Dodoma, Mwanza and Singida, Shinyanga, and Tabora regions in Tanzania. Five roosts were treated on 210 ha in Mwanza region where the birds were seen attacking rice crops. In Dodoma, seven roosts were controlled

on 280 ha where the birds were seen attacking Millets and Sorghum crops. Control operations continued in Singida where nine roosts were detected at the time this report was compiled. QQU control operations were also carried out by DLCO-AE aircraft and MoA/CPB in Siaya County of Nyanza Province, in western Kenya where the birds were seen feeding on rice crops. No QQU activities were reported in other outbreak/invasion countries during this period (AELGA, DLCO-EA, IRLCO-CSA).

Forecast: QQU birds will likely continue being a problem to small grain crop growers in Kenya, Tanzania, Mozambique and Zimbabwe during the forecast period and vigilance is critical to protect crops (AELGA, 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 colony composed of a million birds (very common) is capable of consuming and destroying 7-10 tons or 7,000 to 10,000 kg of seeds/day, enough to feed 15,000-20,000 people for a day.

Rodents: No update was received on rodents during this month, but the pest remains a constant threat to both pre- and post-harvest crops and produces in many countries around the globe.

Note: Several 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 outbreaks and a period of lull.

End note.

Front-line countries where ETOP outbreaks first occur are advised to remain vigilant. Countries in the invasion zones should 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 information with partners and other stakeholders as often as possible. Lead farmers and community forecasters are encouraged to remain vigilant and report any ETOP sightings to field agents and other contact persons.

Inventories of Acridid Pesticide Stocks

ETOP pesticide inventory slightly changed during April as control operations continued in Algeria and Libya (baseline data not available) where a cumulative total of some 6,900 ha were treated.

Mindful of the risk of pesticides becoming obsolete once overstayed their end-of-use, ETOP-prone countries, particularly those with large inventories, but 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. All options should be explored to avoid the risks that old stocks pose to humans, the environment, and non-target organisms as well as the huge financial burden associated with disposing them.

A judiciously executed triangulation ([see page 1 for definition](#)) of stocks from countries with large inventory to where there are immediate needs is a double-edged alternative that is worth considering.

Note: The core message of **pesticide stewardship Program** is to strengthen the national and regional pesticide delivery systems by linking partners at different levels and thereby reduce pesticide related health risks and environmental pollution and improve food security as well as contribute to the national economy. **End note.**

Estimated (acridid) pesticide inventories

Country	Quantities in '000l/kg ^{\$}
Algeria	1,800~
Chad	108.09~
Eritrea	43.9~

Egypt	Data not available
Ethiopia	1.9+~
Libya	Data not available
Madagascar	Data not available
Mali	208.8d~
Mauritania	435.3~
Morocco	4,100~
Niger	28.21+
Senegal	156~~
Saudi Arabia	Date not available
NSD	860"
Tunisia	167.6~
Yemen	33.00 + .527 kg GM

These quantities include ULV, EC and dust formulations
 ~ data not necessarily current
 ~~ as of September 28, 2011
 l = 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 2003-5 DL campaign was tested for quality and found to be usable through 2012
 This includes EC, ULV and Dust for all crop protection uses
 GM = GreenMuscle
 b = biopesticide (Madagascar)
 c = conventional pesticides (Madagascar)
 g = insect growth regulator (Madagascar)

<i>CERF</i>	<i>Central Emergency Response Fund</i>
<i>CIT</i>	<i>Calliptamus italicus</i>
<i>CLCPRO</i>	<i>Commission de Lutte Contre le Criquet Pèlerin dans la Région Occidentale (Commission for the Desert Locust Control in the Western Region)</i>
<i>CNLA/CNLAA</i>	<i>Centre National de Lutte Antiacridienne (National Locust Control Center)</i>
<i>CRC</i>	<i>Commission for Controlling Desert Locust in the Central Region</i>
<i>CTE</i>	<i>Chortoicetes terminifera</i>
<i>DDLC</i>	<i>Department of Desert Locust Control</i>
<i>DL</i>	<i>Desert Locust</i>
<i>DLCO-EA</i>	<i>Desert Locust Control Organization for Eastern Africa</i>
<i>DMA</i>	<i>Dociostaurus maroccanus</i>
<i>DPPQS</i>	<i>Department of Plant Protection and Quarantine Services</i>
<i>DPV</i>	<i>Département Protection des Végétaux (Department of Plant Protection)</i>
<i>ELO</i>	<i>EMPRES Liaison Officers</i>
<i>EMPRES</i>	<i>Emergency Prevention System for Transboundary Animal and Plant Pests and Diseases</i>
<i>ETOP</i>	<i>Emergency Transboundary Outbreak Pest</i>
<i>GM</i>	<i>Green Muscle (a fungal-based biopesticide)</i>
<i>ha</i>	<i>hectare (= 10,000 sq. meters, about 2.471 acres)</i>
<i>IRIN</i>	<i>Integrated Regional Information Networks</i>
<i>IRLCO-CSA</i>	<i>International Red Locust Control Organization for Central and Southern Africa</i>
<i>ITCZ</i>	<i>Inter-Tropical Convergence Zone</i>
<i>ITF</i>	<i>Inter-Tropical Convergence Front = ITCZ)</i>
<i>FAO-DLIS</i>	<i>Food and Agriculture Organizations' Desert Locust Information Service</i>
<i>Kg</i>	<i>Kilogram (~2.2 pound)</i>

LIST OF ACRONYMS

<i>AAW</i>	<i>African armyworm (Spodoptera expempta - SEX)</i>
<i>AELGA</i>	<i>Assistance for Emergency Locust Grasshopper Abatement</i>
<i>AfDB</i>	<i>African Development Bank</i>
<i>AME</i>	<i>Anacridium melanorhodon</i>
<i>APL</i>	<i>Australian Plague Locust</i>
<i>APLC</i>	<i>Australian Plague Locust Commission</i>
<i>CAC</i>	<i>Central Asia and the Caucasus</i>

L	<i>Liter (1.057 quarts or 0.264 gallon or 33.814 US fluid ounces)</i>
LMC	<i>Locusta migratoriacapito</i>
LMM	<i>Locusta migratoria migratorioides (African Migratory Locust)</i>
LPA	<i>Locustana pardalina</i>
MoAFSC	<i>Ministry of Agriculture, Food Security and Cooperatives</i>
MoARD	<i>Ministry of Agriculture and Rural Development</i>
NOAA	<i>National Oceanic and Aeronautic Administration</i>
NSD	<i>Republic of North Sudan</i>
NSE	<i>Nomadacris septemfasciata</i>
OFDA	<i>Office of U.S. Foreign Disaster Assistance</i>
PHD	<i>Plant Health Directorate</i>
PHS	<i>Plant Health Services, MoA Tanzania</i>
PPD	<i>Plant Protection Department</i>
PPSD	<i>Plant Protection Services Division/Department</i>
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>
USAID	<i>Unites States Agency for International Development</i>
UN	<i>the United Nations</i>
ZEL	<i>Zonocerus elegans, elegant grasshopper</i>

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

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