DLCO-EA NEWSLETTER

ESTABLISHMENT OF DLCO-EA

Before Desert Locust Control Organization for Eastern Africa (DLCO-EA) came into being there existed its predecessor, the Desert Locust Survey (DLS), which received direct financial support from Her Majesty's UK Government.

It was, however, felt necessary to establish a successor organization to inherit the duties, property and experience of the Desert Locust Survey, but constructed on an international basis.

A convention establishing the DLCO-EA was finally ratified and signed in Addis Ababa, Ethiopia on 22 August 1962 by representatives of Ethiopia, France (for Djibouti), Kenya, Somalia, Tanzania and Uganda. Later Sudan acceded to the convention (1968)

The ***Headquarters is located in Addis Ababa, Ethiopia***. Member countries, which are represented by the Ministries of Agriculture/Livestock, are ***Djibouti, Eritrea, Ethiopia, Kenya, Somalia, Sudan, Tanzania*** and ***Uganda***, covering a land surface area of about 6,157,725 sq. kms, with an estimated population of 180 million.

The Organization has Country Liaison Offices or Control Reserve Bases, and enjoys Diplomatic Privileges and Immunities accorded to the Specialized Agencies of the United Nations, in all its Member countries. It issues a recognized travel document (Diplomatic and Ordinary Laissez-Passer) to its staff, to facilitate cross-border travels while on official duty.

The Organization maintains its own fleet of fixed wing Aircraft for crop spraying, five of them equipped with Differential Global Positioning System (DGPS), and a network of HF Base radio and mobile (vehicle-mounted) transmitter/receiver sets with approved frequencies for official communication in the region. Pest and weather information and data are therefore routinely exchanged; while Aircraft movement is also monitored and contact maintained during field operations or transit flights.

Contents

Initially, the Organization was mandated to promote control operations and forecasting techniques against upsurges and plagues of the Desert Locust (*Schistocerca gregaria,* Forskål 1775). Later, the mandate was extended to include better management of infestations of other migratory pests, such as the African Armyworm (*Spodoptera exempta* Walk.), the Grain-eating birds (*Quelea quelea* Linnaeus) and the Tsetse fly that transmits the deadly human sleeping sickness (*Trypanasomiasis)* or *Nagana* to livestock.

The mandated insect and bird pests migrate across international borders; they breed and multiply rapidly; they move over long distances and attack crops, pasture and other vegetation; while the Tsetse flies transmit a deadly sleeping sickness disease to livestock and humans when they move into an area in increased numbers.

Regional cooperation facilitates regular exchange of information, early detection of pest development, and hence rapid deployment of Aircraft, operational personnel and equipment for timely intervention to reduce damage to crops and pastures and hence to the realization of food security in the region.

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The regular Ministerial Council Meetings at rotating venues in member countries contribute a common understanding between member states, and stronger regional co-operation

The Regional Organization facilitates the channeling of regional assistance to plant protection services of member states, and the procurement and utilization of regional fund from donors which are of immediate benefit to member states.

Centralized research activities pool resources and reduce costs. Yet the results benefit wider geographical areas and larger populations that share common threats from migrant pests and vectors

The above considerations are still valid and there is a great need for an enhanced capacity of DLCO-EA in order to effectively address the above outlined considerations.

A NEED FOR ENHANCING THE CAPACITY OF DLCO-EA

DLCO-EA Launches New Management Tools

DLCO-EA has launched new management tools, namely; a Strategic plan, a Resource mobilization strategy, a Development of Communications Strategy and a Newsletter.

DLCO-EA Enhances Resource Mobilization

Due to a lot of demands for DLCO-EA services, the secretariat of DLCO-EA has embarked on some initiatives of accessing additional resources for the implementation of its mandate.

A Consultant was hired and Resource mobilization strategy has been developed alongside a bankable project document and Communications strategy.

These documents plus a developed strategic plan are being used for implementation of resource mobilization initiatives.

REVIEW OF PEST SITUATION

DESERT LOCUST

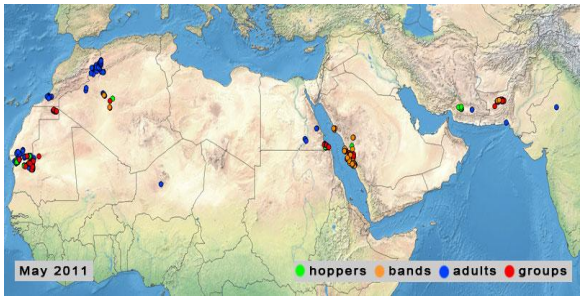
The general Desert Locust situation in the DLCO-EA region remained calm during the period April - June 2011. In Sudan during the first decade of April, small hopper bands of all instars were seen during a ground survey that was conducted by Plant Protection Department (PPD) staff at Wadi Oko north of Tomala (2002N/35 51E). Scattered solitarious hoppers and mature adults were also reported from Port Sudan (19 38N/3713E) to the South of Suakin (1906N/3719E)

Facts: *Each locust can eat its own weight of food/day (2g). Each Km^2 of dense swarm can contain 50,000,000 locusts, eating 100 tons of vegetation per day. A large swarm can cover 1,000 k^2 consuming 100,000 tones of vegetation per day equivalent to a million Elephants or 4 million cattle.*

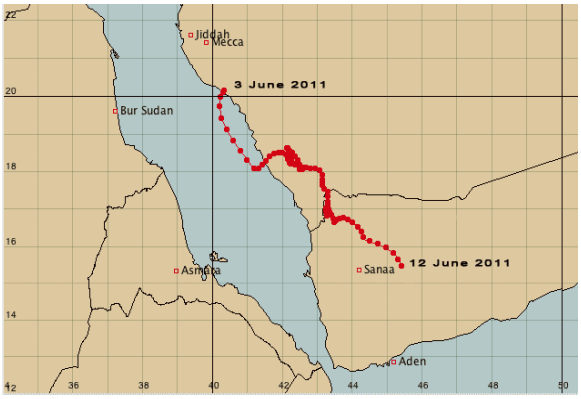
Source FAO

DESERT LOCUST INFESTATION ON RED SEA COAST IN JUNE, 2011

Significant Desert Locust infestations persisted during May on central Red Sea Coast in **Saudi Arabia** near Lith and Jeddah. Ground and aerial teams continued control operations in all infested areas, treating nearly 25,000 ha in May which was nearly double the area treated in April. It is expected that continuing operations will contain current infestations. However, any adults that are not detected or controlled will concentrate in the little vegetation, including cropping areas, which remains green and will form small groups and perhaps a few small swarms. As vegetation is drying out rapidly, the adult groups and swarms move off the coast to the summer breeding areas in the interior of **Yemen** during June.



Desert Locust situation in May, 2011



Movement of Desert Locust in June 2011

FAO DLIS fully understands that the current events in Yemen do not readily permit through and effective survey and control operations in the field. Nevertheless, any activities that can be undertaken in the interior during June will contribute to early warning and response in the Region as part of the Desert locust preventive control strategy.

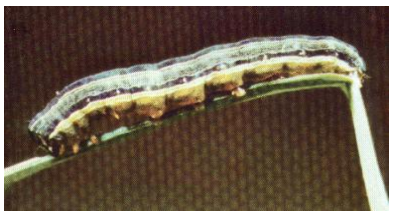
Elsewhere, the situation remains relatively calm. Control operations declined in north-west Mauritania and southeast Egypt but were undertaken in the spring breeding areas in southeast Iran and western Pakistan. Smaller operations were carried out in Western Sahara and near Adrar, Algeria. During June, Desert locust infestations declining in all areas due to on going control operations and drying vegetation.

Source: FAO DLIS

Due to low population, DLCO-EA Aircraft were not requested to undertake survey and control operations of Desert Locusts.

AFRICAN ARMYWORM (AAW)

AAW outbreak were reported in Tanzania at Marangu, Moshi districts in Kilimanjaro Region and Korogwe district in Tanga Region in April in Tanzania. AAW outbreaks were also reported in Harari Region, Oromia Region and Somali Region in eastern Ethiopia during the fourth week of May. The caterpillars were at early stage and control operations were being undertaken by the regional Agricultural Bureaus, on **20,169 ha** of pasture and **46,347 ha** of crop. Ground control operation was also conducted on **8,442 ha** using **12,501** liters of pesticides



Control operations were intensified and 3,400 l of Malathion 96% ULV were transferred from the DLCO-EA's base in Dire Dawa to the MoA offices in eastern and western Hararghe zones of the Oromiya.

The situation remained calm in Kenya and other DLCO-EA member-countries during this period.

QUELEA QUELEA

The seasonal Quelea outbreaks affected central parts and many regions of Tanzania (Dodoma Shinyanga, Mura and Morogoro regions) on Sorghum and Millet

Quelea birds were also reported in Kenya at Siaya and Buryale districts in western province.

Quelea bird damage to Sorghum

***Facts: Quelea** birds can travel ~100 km/day looking for food. Each bird can consume 3-5 gm of grain and perhaps destroying 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).*

Source FAO

ACTIVITIES UNDERTAKEN BY DLCO-EA

1.0 OPERATIONS

DLCO-EA carried out several activities during the period under consideration. Activities carried out included combating the menace from Quelea birds which invaded farms in **Tanzania** and **Kenya**

A DLCO-EA spray Aircraft was deployed in **Tanzania** and started control operation in the first week of April. A total of 73.3 million birds on 2874 ha were treated with 5175 liters of Fenthion (Queleatox 60% ULV).

DLCO-EA Aircraft ready for operation

DLCO-EA Aircraft on Operation

In April in **Kenya**, DLCO-EA Aircraft conducted an aerial control operation in Siaya and Bunyala districts in Western Province. A total of 4 million birds were treated using 200 liters of Queleatox.

DLCO-EA AIRCRAFT SITREP AS AT 30TH JUNE, 2011

A/C REG.	5Y-BCJ	5Y-BCK	5Y-BCL	5Y-KRD	5Y-DLA	5Y-DLO	5Y-BBB	5Y-DLD
C OF A DUE DATE	27/03/2012	08/02/2012	SPECIAL PERMIT FOR TEST FLY	IN PROGRESS	20/02/2012	IN PROGRESS	IN PROGRESS	17/04/2012
CHECK III	20/01/2014	O7/01/2012	13/04/2013	IN PROGRESS	N/A	IN PROGRESS	IN PROGRESS	14/01/2014
PROP. 5YR OVERHAUL	N/A	N/A	N/A	N/A	06/08/2012	N/A	N/A	N/A
A/F HOURS	6 1:30	362:10	460:15	154:35	1170:10	499:15	386:35	53:45
ENGIN (S) HRS	920:55	667:30	460:15	154:35	1001:45	PORT:00:00 STBD:00:00	PORT: 1515:45 STBD: 1515:45	176:00
PROP. HRS	1604:25	362:10	460:15	503:25	2598:15	PORT:1346:25 STBD:1278:05	PORT:175:35 STBD:175:35	176:00
LOCATION	QUELEA KEYA	QUELEA TANZANIA	STANDBY NIROBI	UNDER ACCIDENT REPAIRS	UNHCR MWANZA	NIROBI MAINTENANCE	UNHCR MWANZA	QUELEA KEYA

NB

IMMEDIATE ATTENTION

TO BE NOTED

Prepared by:- Technical Records
Checked by:- Chief Engineer

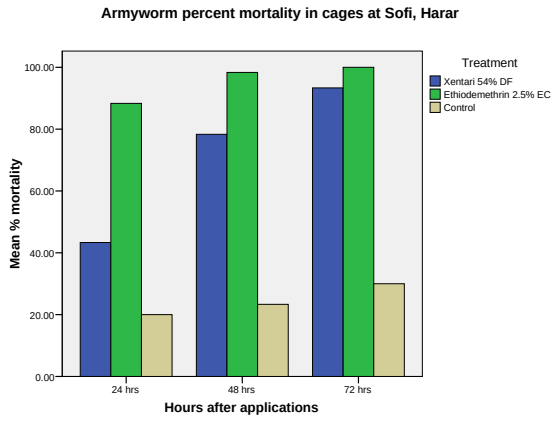
Distribution
Director
CA
OC & CP
Technical Records, Aircraft Stores
Mwanza Field Officer

2. 0 RESEARCH

2.1 Field Evaluation of *Bacillus thuringiensis* (Bio-pesticide) Against African Armyworm in Eastern Ethiopia

At present, chemical control is the most commonly used method of controlling African armyworm in eastern Africa and elsewhere. However, this method can pose a serious risk to human health and the environment unless necessary safety precautions are undertaken. The risk of using synthetic chemical pesticides is very high in eastern Africa where farmers' knowledge on pesticide handling and application is very low and the use of protective clothing is not common. Hence, the main objective of this study was to develop effective and safer alternatives to chemical control of armyworm.

Field trails were conducted in sorghum fields and in the cages at Awbarkadle and Sofi localities in Harari State in eastern Ethiopia in June, 2011.



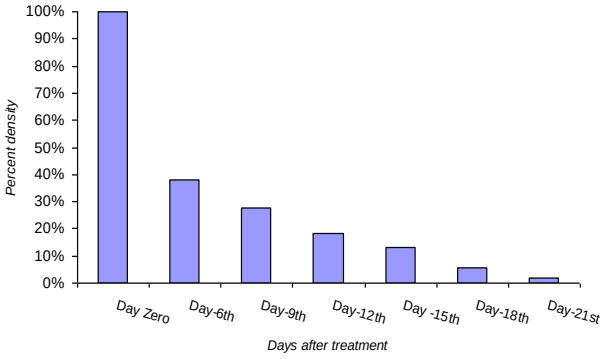
The treatments tested were Xentari 54% DF, a *Bacillus thuringiensis subspecies aizawal* strain, Ethiodemethrin (Deltamethrin) 2.5% EC as standard insecticide and untreated control.

The study shows that Bt is suitable alternative for the control of armyworm. 48 hours after application Bt provided about 80% control. However, 72 hours after application there was no significant difference in the efficacy of Bt and the synthetic deltamethrin. No crop damage was also observed on Bt treated plots

2.2 Efficacy of the bio-pesticide Green Muscle (GM) on mixed population of locusts under natural condition:

Field application of GM on mixed population of locust under natural condition at a dose rate of 100 gm/ha resulted in a total density reduction of more than 90% on the day18th after treatment (Figure 2). It was observed that by day 21st, the treated area was almost free from the locust. Although, the recommended dose of the GM under natural condition is 50 gm/ha, 100 gm/ha was applied to overcome the low viability of the GM spores. However, the result obtained proved that GM has a good performance and it was very successful under natural conditions.

It is to be concluded that appropriate handling of bio-pesticides in the field and application techniques are the key for any successful application of GM under natural conditions. Therefore the amendment of the recommended Standard Operating Procedure (SOP) for the application of GM under field condition can prove better control efficacy.



Percent density reduction of mixed locust populations treated with Green Muscle under natural conditions

3.0 WORKSHOPS AND TRAINING

3.1 CRC/SWAC inter regional workshop on the use and improvement of RAMSES and eLocust2

The FAO's Commission for Controlling the Desert Locust in the Central Region (CRC) and Desert Locust Information Service (DLIS) organized an inter-regional workshop for national locust information officers in the Central and Southwest Asia region on 17-19 May, 2011. The workshop was held at the FAO Regional Office Near East in Cairo, Egypt. The event is a follow-up to similar workshops held in April 2010 and April 2009. The workshop's objective is discussion on the use and improvement of RAMSES, eLocust2 and eLocust2 Mapper in order to strengthen national early warning and reporting.

The workshop was attended by DLCO-EA Chief Information and Forecasting Officer and Senior Information and Forecasting Officer.

Workshop participants

3.2 Refresher training

eLocust2 is a hand held device used by locust officers to record locust and ecological observations and data during survey and control operations. Also relatively new software, eLocust2 Mapper, is being used by locust information officers to manage data

between eLocust2 and RAMSES. As with any new technologies difficulties can arise in using these

tools effectively and correctly. Therefore, CRC and DLCO-EA arranged a refresher training course for the Locust officers based in Hargeissa

Training participants

The overall objective of this training course was to improve the skills of the Locust Officers by increasing their understanding of the importance of quality report in order to detect dangerous Desert Locust infestations as early as possible.

The training was attended by DLCO-EA Caretaker Hargeisa, EMPRES Link Person Hargeisa and secretary in EMPRES office.

UPCOMING EVENTS 2011

- *The 56th Regular session of DLCO-EA Council of Ministers will be held in Nakuru, Kenya in September, 2011*
- *Training on Desert Locust Identification and reporting for NGO's working in locust prone areas in Somaliland, Hargeisa, November 2011*