



# **FAO-EMPRES/CR**

## **Report on**

### **2<sup>nd</sup> Ad Hoc Emergency Prevention Meeting, Khartoum, Sudan**

**6-9 September 2004**

**by C. Pantenius**

## 2<sup>nd</sup> Ad Hoc Emergency Prevention Meeting, Khartoum, Sudan 6-9 September 2004

**Participants:** Mr. Rabie Khalil (Director of the Central Institution for Desert Locust Research and Control), Sudan,  
Mr. Abdel Monheim (Head of Desert Locust Survey and Control Section), Sudan,  
Mr. Ghazi Hawari (Director General of the National Centre for Desert Locust Control), Kingdom of Saudi Arabia,  
Mr. Matoug A.S. Munshi (Head of DL Research Division), Kingdom of Saudi Arabia,  
Mr. Abdu Farea Al Romaih (Director of the Desert Locust Monitoring and Control Centre), Yemen,  
Mr. Bereke Ogbamichael (Director of Crop Health Division), Eritrea,  
Mr. Munir Butrous, Secretary of the Commission for Controlling the Desert Locust in Central Region (CRC)  
Christian Pantenius, EMPRES/CR Coordinator

**Programme:**

- Evaluation of the past season and actions, precaution measures taken since March 2004, and verification of the recommendations by the first meeting.
- Predictions for the coming season - winter campaign.
- Basic principles for preparedness.
- Assessment of the available resources on the example of Sudan.
- A guide for the preparation of requests for donor assistance.
- Preparation of recommendations for the winter campaign.

Because of the Desert Locust outbreaks in several areas of Northwest Africa and the Central Region since October 2003 and the rapidly deteriorating situation, a first Ad Hoc Emergency Prevention Meeting was conducted in Khartoum from 15-17 March 2004 to discuss appropriate counter measures and pre-emptive actions in the immediately affected countries in the Central Region, namely Sudan, Saudi Arabia, Yemen and Eritrea. Short and mid-term scenarios of the likely Desert Locust developments and movements from March 2004 until the winter-breeding season 2004/2005 have been discussed and a regional action plan prepared. Encouraged by the meeting, the Kingdom of Saudi Arabia provided bilateral support to Sudan to fill the most urgent needs of the Locust Centre and a TCP Project was prepared by FAO to support the limited intervention capacities of the Locust Control Units of Sudan, Yemen and Eritrea in terms of training, pesticides, sprayers and HF radio equipment. National action plans have been prepared in the context of the contingency planning approach and followed successfully in most parts.

Reviewing the global Desert Locust developments since September 2003, the climatic conditions in western Sudan were unusually favourable for successful DL breeding during the months of August – October 2003, which led to an increase of the Desert Locust population and resulted in the formation of swarms. In the following, the swarms migrated into the winter breeding areas to continue successful breeding on both sides of the Red Sea. The danger was predicted that undetected and uncontrolled locusts originating from the coastal areas of Saudi Arabia could escape and might migrate into the vast spring breeding areas of the interior of the Arabic Peninsula, where it would have been extremely difficult to achieve a significant impact on the locust population. However, by May 2004 the developing upsurge situation could successfully be contained. The following factors are believed to have contributed to the decline of the locust developments in the Central Region:

- Early alerts contributed to immediate mobilization of resources and control teams in Egypt, Sudan, Saudi Arabia, Yemen and Eritrea,
- Good interaction, collaboration and information exchange between the countries in the Central Region,
- Intensive information exchange by email and telephone between EMPRES/CR, the Commission, the affected countries and DLIS,
- Despite some difficulties at the beginning, good efforts have been made by most EMPRES/CR key countries to reinforce the necessary structures to successfully face the Desert Locust threat,
- The Ad Hoc Emergency Meeting of March 2004 contributed substantially to the sensitization and proper preparation of the summer campaign in the Central Region,
- Successful operations by the Saudi forces prevented the escape of swarms to spring breeding areas in Saudi Arabia,
- The key countries were well aware of following up and monitoring their strategic resources,
- Good bilateral and intra-regional support between key countries such as Saudi Arabia-Sudan and Saudi Arabia-Yemen,
- Unsuitable ecological conditions in most parts of the summer season belt.

#### **Short- and medium-term forecast of the Desert Locust situation in the Central Region form September 2004 to April 2005**

In general, the short to medium term forecast depends on what kind of Desert Locust infestations may or may not exist in Western Sudan and the ecological conditions during the next period. Consequently, two scenarios have been discussed during the meeting: (1) swarms reached Darfur coming from Northwest Africa spring breeding areas, and breeding conditions are favourable, (2) no swarms arrived in Darfur or only an insignificant number could reach this area, and weather conditions are moderate. Most inputs for the scenarios have been provided by Mr. Keith Cressman (FAO AGPP, DLIS).

**Scenario 1:** If a substantial number of swarms arrived in Darfur, it probably occurred about late July to late August. Beyond that, the likelihood of large numbers of swarms arriving is extremely low as there are no more swarms in the spring breeding areas in Northwest Africa. Upon arrival, the swarms would have completed maturation and laid eggs; hatching should have occurred from about mid-August until late September with hopper band formation during September and October. This suggests that new swarms (the first summer generation) would start forming by the end of September and continue to early November. Those swarms that form early and, if conditions remain favourable, could mature in situ, could lay eggs and a second generation of breeding would occur. These possibilities are rated extremely low. But in case, a portion of the resulting swarms could move towards the northwest to reinvade the Western Region, while the remaining population would move towards the Red Sea coast, initially the coastal plains of Sudan and later across the Red Sea to Saudi Arabia (if the plains on the Sudanese side are dry). This could occur in October-December. If swarms get onto the Sudanese Red Sea coast, they could drift southwards onto the Eritrean coast. Similarly, they could drift southwards along the Saudi coast to Yemen. Again, in case the ecological conditions remain favourable, this could most likely occur October-December.

Swarms normally mature quite quickly on the Red Sea coast and could lay eggs in November-December with hopper bands forming in December-February and the first generation of winter swarms forming in February-March 2005.

**Scenario 2:** Bases on available information and the weather prediction until January 2005, scenario 2 seemed to be more realistic given that only a few swarms have been reported in Northeast of Chad about 150 km from the Sudanese border. The scale of swarm invasion into Chad was significantly lower than in Mauritania. This suggests that there are few if any swarms currently present in Darfur. In late July some scattered localized, solitary immature adults were detected by survey teams in North Kordufan, while other areas in White Nile, River Nile, and Khartoum States were found free of any Desert Locust infestation. Also during August the level of infestation remained the same in these areas. Rainfall was reported to be beyond average and the vegetation cover remained patchy. Besides in Sudan, only in Yemen some localized infestation of grouping solitary DL has been reported from Shabwa during late August 2004.

Below average rainfall is further expected in most parts of the Central Region during the period from September 2004 – January 2005. This will lead to patchy vegetation and may result in delayed, if not failure of successful Desert Locust breeding. Because of the prevailing climatic conditions it was seen not very likely that swarms originating from Northwest Africa would arrive in the Central Region during the remaining summer season until mid October and the following winter breeding season. Even if few undetected swarms arrived from Chad to Wadi Howar in North Darfur during August, further successful breeding of a second gregarious generation is not likely to take place.

Despite the predicted relatively calm Desert Locust situation in the forthcoming winter season, the capacities at the Locust Control Units in the Central Region need to be kept fully operational and need to be further strengthened in case of possible swarm invasion from Northwest Africa that cannot be excluded to happen during the next summer season 2005. Also additional precaution measures should be put in place in case of any unusual rainfall that might occur in Aden Gulf area. It is worth keeping in mind that all action plans should be flexible enough to adapt easily to changing situations, especially in cases where there are significant gaps in early warning monitoring such as in Darfur.

#### **Agreed actions to be performed in the key countries of the Central Region by the Locust Control Units**

**September 2004:** Even if rainfall improves, no significant Desert Locust developments are expected in the summer breeding zone of the key countries.

**Sudan:** The secured areas in Darfur should closely be monitored with the help of other UN Organizations to spot any undetected local breeding or any previously undetected swarm infestation that may remain from incoming swarms from Chad.

The rainfall and locust developments in North Kordufan should be surveyed by 4 Survey & Control Teams (2 from the PPD HQ in Khartoum and 2 local teams from the State Plant Protection Directorate).

1 additional Survey & Control Team each should survey the breeding areas in White Nile, River Nile, Khartoum and Kassala/Red Sea States.

3 aircraft should be contracted locally and 2 aircraft requested from DLCO-EA as back-up resources.

**Note:** Pre-positioning of resources (pesticides, sprayers, fuel etc.) and maintenance of 13 airstrips in North Kordufan and North Darfur have been completed during July 2004. A national Desert Locust Steering Committee has been formed in June 2004. Emergency Committees have been formed in North Kordufan and North Darfur in August.

- Eritrea: 1 Survey & Control Team in each of the Western and Eastern Lowlands should conduct surveys and monitor the Desert Locust developments and ecological conditions.
- 3 aircraft, 1 from DLCO-EA and 2 from the GoE should be based in Asmara on stand by.
- Note: Pest Control steering committees have been established at national and Zoba levels.
- Yemen: 1 Survey & Control team each in Shabwa and Marib areas should continue monitoring the Desert Locust developments.
- Due to the off-season rains in the Tihama in July and August, a Survey & Control team from the HQ in Sana'a should be sent to the winter breeding areas along the Red Sea coast.
- Note: All materials have been checked and are kept at the HQ in Sana'a.
- Saudi Arabia: 2 Survey teams have been prepared to start regular surveys in Tihama, Assir and Jazan. 5 aircraft are available on stand by for Desert Locust control operations.
- Note: Resources have been checked and pre-positioned, and 26 airstrips are being prepared.
- General remark: In order to be operational for the winter campaign, Eritrea might require additional vehicles as well sprayers (knap-sack and hand-held ULV sprayers). Also Sudan might need additional pesticides, sprayers, vehicles and funds for covering flying hours in order to be fully operational and to be prepared for any eventuality by the end of December. It is hoped that the pledged assistance materializes as soon as possible.*
- October:** If good rains are received in Sudan in the summer breeding areas, some small swarms could be expected and could move towards the Eastern areas.
- Sudan 2 local Survey & Control teams should remain in North Kordufan. The other 2 HQ Survey & Control teams should be transferred to the Red Sea coast to join the local forces. The total number of teams at the Red Sea coast will add up to 3.
- The local Survey & Control teams in White Nile and Khartoum States and the HQ Survey & Control team in River Nile should remain in their positions.
- 12 additional Survey & Control teams should be ready upon call and on stand-by for any control operation by the end of October. The 24 Plant Protection staff should receive refresher training before end of October.
- Pre-positioning of additional resources for the winter campaign and maintenance of airstrips in Suakin, Tokar and Gabiet should be ready by end of October.
- Eritrea: Maintain Survey & Control teams as in September.
- Local and national Survey & Control training courses should be conducted for Plant Protection staff and farmers.
- Yemen: The 2 local Survey & Control teams in the summer breeding areas can be demobilized.

- A Survey & Control team from the HQ will continue monitoring the winter breeding areas along the Red Sea coast. One local Survey & Control team should start monitoring the area along the Gulf of Aden.
- A national training course on survey aspects for Plant Protection staff should be conducted to reinforce the survey capacities.
- Saudi Arabia:** 2 Survey teams should be maintained at the Tihama-Assir area.
- Additional teams should be deployed from the HQ to survey the Jazan area.
- General remark:** *No additional needs likely, in case the resources requested for Sudan and Eritrea by December are being provided.*
- November:** Infestation in the summer areas throughout the whole Region will decline and some infestation could be expected to occur in the winter breeding areas. Attention should now shift to the winter breeding season.
- Sudan:** All local teams from the summer breeding areas will be demobilized. Seasonal camps will be closed and all materials should be transferred to the central stores in the States.
- 1 additional Survey & Control team should join the winter campaign, making a total of 4 teams.
- In case of control operations being conducted, the used pesticides should be replenished from the central store at the HQ as soon as possible.
- 3 aircraft should be placed in Tokar, Suakin and Gabiet.
- Eritrea:** The Survey & Control team from the Western Lowland should now be transferred to the Eastern Lowland.
- The 3 aircraft should be kept on stand-by in Asmara.
- Yemen:** Continue monitoring the winter breeding areas along the Red Sea coast.
- Saudi Arabia:** 6 back-up Control teams should be prepared at the HQ in Jeddah to join the campaign in case the need arises.
- The Survey teams remain the same as in October.
- December:** Breeding is likely to occur on both sides of the Red Sea coast and if rainfalls are good, the Desert Locust population is expected to increase.
- Sudan:** Up to 12 Survey & Control teams that had been set up at the HQ during October could now be mobilized to reinforce the 5 teams at the Red Seas Coast.
- Eritrea:** Same as in November.
- Yemen:** Same as in November.
- Saudi Arabia:** Same as in November. A national Survey & Control training course should be conducted in the Jazan area for agricultural staff.
- January:** Increase of the Desert Locust population is expected due to the likely good rainfall and good vegetation cover.
- Sudan:** Same as in December.
- Eritrea:** Same as in December.

- Yemen: 2 Survey & Control teams from the HQ should join the campaign taking place at the coastal areas. The equipment to supply 12 teams should be in good conditions by the end of January 2005 latest.
- Saudi Arabia: Additional 4 Control teams should join the campaign if required; making total number of teams available 10.  
3 aircraft contracted by the Centre should be ready to join the campaign at any time.
- February:** Infestation in the winter breeding areas is likely to decline due to reduced rainfall and drying vegetation.
- Sudan: Maintain the 4 core Survey & Control teams at the Red Sea coast for monitoring and controlling the remaining infestation.  
Maintain 1 one aircraft in Suakin and return the other 2 to their base.
- Eritrea: 1 Survey & Control team will be called to Asmara. 1 team should be kept in the field to monitor the remaining infestation and to take action in case needed.  
Release the DLCO-EA aircraft positioned in Asmara.
- Yemen: Keep the 2 Survey & Control teams at the Tihama and Aden Gulf areas.
- Saudi Arabia: Same as in January.
- March/April:** Vegetation will further continue to dry up and the soil will become unfavourable for locust breeding. Desert Locust infestation will decline drastically.
- Sudan: Monitor the remaining infestation and close the winter campaign by April. The Survey & Control teams from the HQ will return to their base.
- Eritrea: Call the Survey and Control team by end of March.
- Yemen: Survey & Control teams from the HQ should return back to their base. Close campaign by end of March
- Saudi Arabia: 5 Survey teams will be kept at the coast to monitor the area north of Jeddah up to Duba.  
Another 5 Survey teams should be sent to the spring breeding areas to monitor the infestation and rainfall situation by mid March and should remain there at least until mid of April.

### Recommendations

- Maintain transmitting high quality locust reports as timely as possible to DLIS,
- Maintain regular surveys in the Desert Locust breeding areas,
- Make use of all locust and ecological information from within the country, the Central Region and beyond,
- The Locust Control Units should closely observe in collaboration with CRC/EMPRES and DLIS the Desert Locust developments outside the Central Region,
- Based on the agreed regional action plan, detailed national action plans should be prepared by the participating countries for the next six months and to be modified according to the changes of the Desert Locust situation. These action plans should be distributed through the CRC/EMPRES to all member countries by early November,

- Continue producing improved monthly national Desert Locust Bulletins or Newsletters in order to keep all important stakeholders informed of the Desert Locust situation and the available resources,
- Bilateral collaboration between countries in technical as well as in financial aspects should be further strengthened,
- EMPRES/CRC should be kept closely informed of the locust information and activities in the countries,
- A follow-up meeting should be organized by March/April 2005.

#### **Additional related aspects addressed**

The reporter gave a brief overview on the principle aspects of early preparedness in Desert Locust management (Golden Rules) which should be followed by the Locust Control Units in order to reduce the risk of being taken by surprise. It was recalled that the essential aspects are relying on efficient national information and forecasting systems, the reliability of survey reports, regular efforts in training and retraining of control personnel, proper information of the national and international stakeholders, constant monitoring of the available resources against the predicted locust developments and likely required control operations, and proper planning of the survey and control activities and of the logistics that need to be put in place in advance. It was mentioned that a period of at least three if not four months should be planned ahead in order to ensure that all necessary resources can effectively be used in due course of the predicted event.

The countries concerned are usually in the best position to predict possible shortfalls of their resources and to alert the international community. Therefore, a short guide has been prepared and discussed with the participants on how best to draft more convincing project proposals in order to increase the chances for easy acceptance. The participants have been made aware of some frequently made mistakes which could lead to significant delays, and some important aspects that need to be considered in future proposals such as environmental aspects, campaign monitoring and the use of environmentally less harmful technologies and strategies. By demonstrating the use of upsurge and plague control spreadsheets, developed by Mr. Symmons, the required resources on the example of Sudan have been assessed. The resources available and/or expected were found sufficient to cope with likely scenarios as discussed above. The frequent use of these spreadsheets by the Locust Management has been recommended to be in a better position to detect possible shortfalls at early stages.



**Annex: Action Plan, Sudan**

Month	Prediction	Activity	Inputs	Remarks
September (2004)	DL developments are expected not to be high in the summer breeding zone especially if rainfall ceases early this season.	<ul style="list-style-type: none"> <li>Because of the uncertainty of locust reports from Darfur, intensively monitor the whole western region with especial attention to the insecure areas in North and West Darfur to spot any previously undetected DL infestation,</li> </ul>	<p>2 survey and control teams (4 vehicles) mobilized in August,</p> <p>22 tons pesticides and 96 sprayers positioned in Al Fashir and Geneina in August,</p>	UN helicopter assistance required,
		<ul style="list-style-type: none"> <li>Carry out surveys in the areas of North Krodufan, Khartoum State, River Nile-Atbara, Northern State, Durdeib, Sinkat and Kassala,</li> </ul>	8 survey and control teams since July (12 vehicles),	There is a shortage of 4 vehicles,
		<ul style="list-style-type: none"> <li>Provide additional 4 vehicles from the Centre,</li> <li>Reinforce the capacities of the teams in case of need,</li> </ul>	<p>Locust Centre in Khartoum: 60 tons pesticides, 12 sprayers, 12 vehicles,</p> <p>El Obeid: 4 sprayers, 10 tons pesticides positioned,</p> <p>Khartoum state: 2.5 tons pesticides, 4 spray ers positioned,</p> <p>River Nile : 3 tons pesticides, 40 sprayers,</p> <p>Kassala : 15 sprayers, 3,5 tons pesticides,</p>	

Month	Prediction	Activity	Inputs	Remarks
		<ul style="list-style-type: none"> <li>Contract additional 3 aircraft</li> </ul>	1 aircraft contracted by 7 <sup>th</sup> September by UNDP	13 airstrips in Darfur and Kordufan repaired in August 2004,
			20,000 L avgas available at the Centre (= 100 flying hours)	There is a shortage of 30,000 L avgas (=150 flying hours)
		<ul style="list-style-type: none"> <li>Regularly register all climatic and locust data in the central data base (RAMSES),</li> </ul>		
		<ul style="list-style-type: none"> <li>Organize DL Steering Committee Meeting by 27 September,</li> </ul>		The members are: FAO, UNDP, MoF, Meteorological Department, Federal Government Bureau, PPD,
		<ul style="list-style-type: none"> <li>Inform FAO HQ, RNE, FAOR SDN, MoA and other relevant parties of the DL developments,</li> </ul>		
October (2004)	In case of unexpected good rainfall in the summer breeding areas, some small swarms could be expected which might move towards the winter breeding areas of the Red Sea coastal plains.	<ul style="list-style-type: none"> <li>Continue monitoring the summer breeding areas (see September),</li> <li>Deploy 2 additional survey and control teams to Suakin (winter campaign base) to join the permanently positioned team.</li> </ul>	4 survey and control teams  19 sprayers, 6.8 tons pesticides, 2 4WD vehicles, 2 trucks,  33 tons pesticides in Port Sudan as strategic reserve,	The winter campaign base in Suakin is temporary accommodated in a building and a new building needs to be reconstructed.

Month	Prediction	Activity	Inputs	Remarks
		<ul style="list-style-type: none"> <li>Repair airstrips in Suakin and Tokar,</li> </ul>		A third airstrip in Gabiet rehabilitated in March 2004
		<ul style="list-style-type: none"> <li>Mobilize 12 additional survey and control teams at HQ to reinforce the capacity for the winter campaign in case needed,</li> </ul>	24 vehicles, 12 sprayers,	
		<ul style="list-style-type: none"> <li>Conduct refresher training for the above personnel,</li> </ul>		
		<ul style="list-style-type: none"> <li>Cease the survey activities in North and West Darfur by end of the month,</li> </ul>		
		<ul style="list-style-type: none"> <li>Organize DL Steering Committee Meeting by 25 October,</li> </ul>		
November (2004)	DL populations in the summer breeding areas will decline, but some scattered DL can now be expected to occur in the winter breeding areas of Sudan.	<ul style="list-style-type: none"> <li>Demobilize the local survey and control teams in the summer breeding areas,</li> </ul>		
		<ul style="list-style-type: none"> <li>If the situation continue to be calm in the west, remove all equipment and pesticides from the seasonal camps to central stores of the States,</li> </ul>		

Month	Prediction	Activity	Inputs	Remarks
		<ul style="list-style-type: none"> <li>Deploy 1 additional survey and control team from the DL Centre to join the winter campaign,</li> </ul>	1 sprayer	Total number of teams available at Suakin 5 teams,
		<ul style="list-style-type: none"> <li>Conduct intensive surveys along the Red Sea coast (from Tokar to Halayib),</li> </ul>		In case of major DL infestation and intensified control operations, replenish the pesticides stores in Suakin and Tokar.
		<ul style="list-style-type: none"> <li>Deploy 3 aircraft to Tokar, Suakin and Gabiet,</li> </ul>		
		<ul style="list-style-type: none"> <li>Organize DL Steering Committee Meeting by 22 November,</li> </ul>		
December (2004)	If rainfall is good, DL breeding is likely to take place along the Red Sea coast and DL population is expected to increase.	<ul style="list-style-type: none"> <li>Deploy the 12 back-up survey &amp; control teams stationed at the DL Centre to join the winter campaign,</li> </ul>		In case required.
		<ul style="list-style-type: none"> <li>Continue monitoring of the winter breeding areas,</li> </ul>		
		<ul style="list-style-type: none"> <li>Conduct control operations as required,</li> </ul>		Major infestation (> 5,000 ha) should be treated by aircraft,

Month	Prediction	Activity	Inputs	Remarks
		<ul style="list-style-type: none"> <li>Assure regular and fast DL information transfer from the field to the DL Centre,</li> </ul>		
		<ul style="list-style-type: none"> <li>Regularly inform all stakeholder</li> </ul>		
		<ul style="list-style-type: none"> <li>Closely monitor the stock reserves and inform the MoA of any shortfalls,</li> </ul>		Alert FAO and the donor community in case of any likely shortfall during the next 3-4 months.
		<ul style="list-style-type: none"> <li>Organize DL Steering Committee Meeting by 20 December,</li> </ul>		
January (2005)	The DL population is expected to increase due to rainfall and hence good vegetation cover in the winter breeding areas.	<ul style="list-style-type: none"> <li>Continue monitoring of the winter breeding areas,</li> </ul>		Unusual high rainfall may occur in the Eastern Region which could make breeding conditions more favourable.
		<ul style="list-style-type: none"> <li>Conduct control operations as required,</li> </ul>		
		<ul style="list-style-type: none"> <li>Assure regular and fast DL information transfer from the field to the Centre,</li> </ul>		
		<ul style="list-style-type: none"> <li>Regularly inform all stakeholders,</li> </ul>		

Month	Prediction	Activity	Inputs	Remarks
		<ul style="list-style-type: none"> <li>Closely monitor the stock reserves and inform the MoA of any shortfalls in advance,</li> </ul>		
		<ul style="list-style-type: none"> <li>Organize DL Steering Committee Meeting by 24 January,</li> </ul>		
February (2005)	DL infestation threat is likely to decline if rainfall reduced and dried up of the vegetation.	<ul style="list-style-type: none"> <li>Maintain 5 core survey and control teams at the Red Sea coast for monitoring and controlling any remaining infestation,</li> </ul>		In case of undetected infestation, gregarious hopper bands and swarms could develop and swarms could cross the Red Sea to Saudi Arabia and could move to South Egypt.
		<ul style="list-style-type: none"> <li>Call 2 aircraft back to their main base,</li> </ul>		1 aircraft should remain in Suakin at stand-by.
		<ul style="list-style-type: none"> <li>Closely observe the DL developments in Northwest Africa,</li> </ul>		
		<ul style="list-style-type: none"> <li>Assure regular and fast DL information transfer from the field to the DL Centre,</li> </ul>		
		<ul style="list-style-type: none"> <li>Organize DL Steering Committee Meeting by 28 February,</li> </ul>		

Month	Prediction	Activity	Inputs	Remarks
March/April (2005)	Vegetation will continue to dry up and the soils will become unfavourable for locust breeding. The DL infestation threat will decline drastically.	<ul style="list-style-type: none"> <li>Monitor the remaining infestation with 2 survey and control teams</li> </ul>		
		<ul style="list-style-type: none"> <li>Return all other survey and control teams to the DL Centre,</li> </ul>		
		<ul style="list-style-type: none"> <li>Call the remaining aircraft,</li> </ul>		
		<ul style="list-style-type: none"> <li>Close the winter campaign,</li> </ul>		
		<ul style="list-style-type: none"> <li>Organize DL Steering Committee Meeting by 28 March,</li> </ul>		
		<ul style="list-style-type: none"> <li>Participate in EMPRES/CRC Emergency Prevention meeting by mid March 2005,</li> </ul>		
		<ul style="list-style-type: none"> <li>Return all equipment and remaining pesticides to the Centre and the main stores,</li> </ul>		
		<ul style="list-style-type: none"> <li>Repair and replace damaged equipment,</li> </ul>		

Month	Prediction	Activity	Inputs	Remarks
		<ul style="list-style-type: none"> <li>Take stock of the remaining equipment of all PPD stores and stations,</li> </ul>		
		<ul style="list-style-type: none"> <li>Identify the needs for the next summer campaign 2005,</li> </ul>		
		<ul style="list-style-type: none"> <li>Assess the likely DL developments in Northwest Africa and initiate advance preparations for the summer campaign,</li> </ul>		In collaboration with FAO HQ, CRC and EMPRES
		<ul style="list-style-type: none"> <li>Prepare campaign report</li> </ul>		
		<ul style="list-style-type: none"> <li>Organize DL Steering Committee Meeting by 25 April,</li> </ul>		

**Some Definitions:**

**Outbreak:** A marked increase in locust numbers due to concentration, multiplication and gregarization which, unless checked, can lead to the formation of hopper bands and swarms.

**Upsurge:** A period following a recession marked initially by a very large increase in locust numbers contemporaneous outbreaks followed by the production of two or more successive seasons for transient-to-gregarious breeding in complementary seasonal breeding areas in the same or neighbouring Desert Locust regions.

**Plague:** A period of one or more years of widespread and heavy infestations, the majority of which occur as bands or swarms. A major plague exists when two or more regions are affected simultaneously.

**Solitarius:** The phase in which individual locusts live mostly separate from each other.

**Gregarious:** The phase in which large numbers of individuals gather together.