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DESERT LOCUST CONTROL COMMITTEE

Fortieth Session
Rome, 19-22 June 2012
Overview of the Desert Locust situation from March 2009 to May 2012
(Agenda Item 4)

This working paper includes information and data received by DLIS up to 5 June 2012. It will be updated in the DLCC session.

I. Summary

Seven Desert Locust outbreaks developed between March 2009 and May 2012. Three of the outbreaks occurred in the Western Region in Mauritania (October-December 2009, October-May 2010/11) and along the Libyan-Algerian border (February-May 2012), three in the Central Region in Yemen and northern Somalia (March-June 2009) and in Sudan (October-May 2010/11), and one in South-West Asia along the Indo-Pakistan border (October-November 2010). Small swarms formed in all of the outbreak areas except in Mauritania in 2009. Although the outbreaks did not develop further due to control operations and poor rains, a few swarms did escape from northern Sudan to Saudi Arabia (November 2010) and Egypt (January 2011), and adult groups moved from Algeria and Libya to Niger (June 2012). Insecurity hampered survey and control operations in Algeria and Libya in 2012. A total of 350,000 ha were treated during the period under report, mainly in Saudi Arabia, Mauritania, Algeria, Sudan, Pakistan and Libya. In general, locust activity was greatest between autumn 2010 and spring 2011, and during spring 2012. No significant breeding occurred during the winter of 2010 and summer of 2011.

II. Western Region

Spring 2009. Scattered solitary adults were present in parts of northwest Mauritania (March), in the northern part of the Western Sahara (March-July), south of the Atlas Mountains in Morocco (March-July) and in the central Sahara in Algeria (March-July). Small-scale breeding occurred in northwest Mauritania (March), northern Western Sahara (July), the Draa Valley in Morocco (May-June) and central Algeria (April-May). A few small groups of solitary and *transiens* adults formed in

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Morocco during March and June. Ground control operations were undertaken in Morocco (1,858 ha March-July) and Algeria (2,640 ha April-May).

Summer-Autumn 2009. In Mauritania, small-scale breeding commenced in the northwest in June and in the south during July, and continued until October. Locust numbers increased in September and control operations were initiated. By the end of the month, an outbreak developed in western Mauritania where adults arrived from the summer breeding areas and a second generation of breeding led to the formation of hopper groups and bands during October. A few adults moved into adjacent areas in Western Sahara. Control operations (13,907 ha), poor rains and a northerly movement of scattered adults to the Western Sahara and Morocco brought the outbreak to an end by December. Surveys could not be carried out during the summer in Mali and Niger due to insecurity but scattered adults were seen in the extreme south of Algeria during July and August, and on the Tamesna Plains in Niger, in central Mali and in Chad during October. In Algeria, small-scale breeding occurred in the central Sahara in November and December, giving rise to *transiens* hoppers and solitarious adults (240 ha treated). In Niger, small groups of hoppers and immature adults were present in Tamesna during December (1,605 ha treated).

Winter 2009 to Spring 2010. Small-scale breeding occurred in northwest Mauritania from December to February but locust numbers remained low and control operations were not required. In North-West Africa, small-scale breeding occurred during March and April in the Draa Valley in Morocco, in central and southern Algeria, and in western Libya, giving rise to solitarious and *transiens* populations, some of which formed small groups. Control operations were carried out in Morocco (1,798 ha May-June), Algeria (878 ha May-July), and Libya (40 ha May).

Summer 2010. Good rains fell throughout the summer breeding areas in the northern Sahel from July to mid-September. Small-scale breeding occurred during August in southeast Mauritania and northern Mali, and during September and October in west and northwest Mauritania, on the Tamesna Plains in Niger, and northeast Chad. In Niger, locusts concentrated and formed a few small groups as vegetation dried out in Tamesna during October. In Mali, immature adults formed groups in the north during November.

Autumn 2010 to Spring 2011. Breeding continued in northwest Mauritania for eight months, leading to the development of an outbreak in which hoppers and adults concentrated and formed groups until the end of May. Some adults moved to northern Mauritania in late November where they persisted until May. Adults also moved to the southern part of the Western Sahara in Morocco in early December and laid eggs. Further laying occurred from January to March by adult groups and two small swarms (in March), giving rise to hopper groups in April. Groups of immature and mature adults appeared in northeast Western Sahara in late May. Control operations (64,454 ha) carried out in Mauritania during the eight months prevented large-scale swarm formation and migration. In Algeria, low numbers of adults were present in parts of the central and southern Sahara from October to April. Control operations (410 ha) were carried out in December against scattered adults in the south. In February, mature adults concentrated and formed groups in parts of the central Sahara where small-scale breeding gave rise to hopper groups in April and a few bands in May. In Morocco, scattered adults were present along the southern side of the Atlas Mountains from January to May. As a result of control operations in Morocco (7,039 ha January-August) and Algeria (1,224 ha February-August), locust numbers had declined by early September. In northern Mali, small-scale breeding occurred in December and control operations (850 ha) treated *transiens* hoppers and groups of mature adults. In Niger, isolated adults were present in the Air Mountains in February and May, and on the Tamesna Plains in March.

Summer-Autumn 2011. Although good rains fell in the northern Sahel from June to September, only limited breeding occurred in Mali (September), Mauritania (September-October), Niger (September and November), and perhaps in Chad (October). In northern Mali, nomads first reported scattered solitarious adults in June, isolated immature and mature adults were present during August, and small-scale breeding occurred in September, causing small groups of immature solitarious and *transiens* adults to form in October (1,200 ha treated). In Niger, scattered immature and mature adults were seen on the Tamesna Plains during June, a few adults were copulating in July, isolated hoppers and adults

were present in August, small-scale breeding occurred during September in Tamesna and in the southeast, and scattered adults were present in southern Tamesna in October. Small-scale breeding occurred in November in parts of Tamesna (95 ha treated), the Air Mountains, and the western Tenere Desert, and isolated hoppers were present in December and January. In Mauritania, isolated mature adults were present from July to September. Small-scale breeding occurred in September and October (60 ha treated) but locust numbers remained low. Locusts moved from the south towards the northwest in October and November. Locust numbers declined in December. In Chad, isolated immature and mature adults were present in October and local breeding may have occurred; isolated adults persisted during November.

Winter/Spring 2012. In early January, small patches of mid-instar *transiens* and gregarious hoppers were reported in southwest Libya near Ghat. The infestations originated from local breeding that occurred after unusually good rains in early October. As locust hoppers and adults concentrated in early February, the number and density of infestations increased, adults moved into southeast Algeria, and an outbreak developed. Egg laying occurred in March, followed by hatching and hopper band formation in April, and swarm formation in mid-May. The Libyan national locust program's capacity to carry out routine monitoring and respond to outbreaks was badly weakened by events in 2011. Access to potentially infested areas along both sides of the border by national survey and control teams was severely restricted due to insecurity. Algeria treated 41,664 ha and Libya treated 21,400 ha from January to May. During the second half of May, groups of immature adults moved from the outbreak area to southern Algeria, reaching Arlit in northern Niger on 30 May. Locusts declined in Algeria and Libya as by additional groups appeared in northern Niger (Tamesna, Air Mountains, Djado Plateau) in early June.

III. Central Region

Spring 2009. Two outbreaks developed in March, one on the southern coast of Yemen within an area of about 1,000 km² and one on the northwest coast of Somalia within an area of about 2,000 km². Numerous small hopper bands and a few small swarms formed in both countries from March to May and swarms moved into the interior of both countries in April, and crossed into Djibouti and eastern Ethiopia. In May, small hopper bands formed on the edge of the Empty Quarter in Yemen. In June, swarms moved east across northern Somalia and west into eastern and northern Ethiopia where they persisted until August. In Yemen, adult infestations declined during June. Control operations were carried out in Somalia (1,874 ha) and Ethiopia (3,064 ha), including aerial operations and the use of Green Muscle™, and in Yemen (6,015). In Saudi Arabia, small hopper bands were treated (269 ha) on the Red Sea coast from April and May.

Summer 2009. Small-scale breeding commenced in June in the interior of Sudan where good rains fell throughout the summer but locust numbers remained low.

Winter 2009/10. Low numbers of adults appeared on the Red Sea coast of Sudan in November and on the northwest coast of Somalia in December. Small-scale breeding occurred in Saudi Arabia and, to a lesser extent, in Egypt, Sudan, and Eritrea. In Saudi Arabia, control operations (3,526 ha) were carried out against small groups of hoppers and bands that formed in one area on the Red Sea coast from March to June and against hopper bands that formed in the interior in June.

Spring 2010. During April, small-scale breeding occurred in a few places on the southern coast in Yemen and in northeastern Oman where hoppers concentrated and formed small groups in May. Control operations were not required. Isolated adults were seen in eastern Ethiopia during May. Heavy rains associated with Cyclone Phet fell in northern Oman on 3-4 June.

Summer 2010. Scattered mature adults appeared in June along the Nile River in northern Sudan, in southern Egypt, in the interior of Yemen and in northern Oman. Good rains fell in the summer breeding areas in the interior of Sudan and Yemen, and in western Eritrea during July and August. Local breeding occurred during July in eastern Ethiopia and during September in the Baiyuda Desert in northern Sudan and on the plateau in northern Somalia. An outbreak developed in northern Sudan in

late October as small hopper bands and adult groups formed, including a mature swarm, which continued until mid-December. Control operations treated 10,378 ha.

Winter 2010 / Spring 2011. From mid-November to mid-December, groups and small swarms of immature and mature adults moved from the outbreak areas in the interior of Sudan to the Red Sea coastal plains as well as subcoastal areas in the northeast and laid eggs. Hatching and band formation occurred from mid-December to February. Adult groups and small swarms laid eggs in the northeast and on the central coast during February, giving rise to hopper bands in March and April. In Saudi Arabia, at least one group of immature adults crossed the Red Sea from Sudan to the northern coastal plains at the end of November and probably dispersed to the central coast where groups of adults laid eggs. Two generations of breeding occurred until early June and caused an increasing number of hopper bands to form as well as groups of adults and a few swarms. Ground and aerial control operations were undertaken from December to March (25,715 ha). Groups of adults and a few small swarms laid eggs on the Red Sea coast in southeast Egypt from mid-January to mid-February, hatching occurred from the last week of January to early March, and hoppers formed bands and immature adults formed groups until mid-April (5,288 ha treated). Thereafter, infestations declined on the Red Sea coast as adults moved inland towards Lake Nasser where they dispersed. In Eritrea, small-scale breeding occurred on the Red Sea coast in January and February and a few small hopper groups formed as vegetation dried out (920 ha treated). In Yemen, small-scale breeding occurred on the Red Sea coast during October and November, causing a few small hopper groups and bands to form in December (1,450 ha treated). Small-scale breeding occurred again in January. In northern Oman, teams treated (8 ha) *transiens* adults in November and scattered adults were present on the northern coast in March.

Summer 2011. Although good rains fell in the summer breeding areas in the interior of Sudan in July and August, only low numbers of immature and mature adults were present from June to October and breeding was not detected.

Autumn 2011 to Spring 2012. A few isolated adults from summer breeding areas in the interior of Sudan appeared on the Red Sea coast in Tokar Delta from November to March and on the central coastal plains in Eritrea during December. Scattered adults were present in subcoastal areas in the northeast during January. In Saudi Arabia, small-scale breeding occurred on the central Red Sea coast in November and low numbers of adults were present in December and January. In Yemen, scattered adults were seen on the northern Red Sea coastal plains during December. Generally dry conditions prevailed during the winter. In northern Oman, local breeding occurred during February and immature adults were present in March. Small-scale breeding took place in central Oman during March and April, causing small hopper groups to form in May.

IV. South-West Asia Region

Spring 2009. Small-scale breeding occurred in western Pakistan (10 ha treated) and southeast Iran during April, and groups of hopper were treated (5,500 ha) in Iran during May and June.

Summer 2009. Only low numbers of locusts were present along both sides of the Indo-Pakistan border due to poor monsoon rains.

Spring 2010. Isolated adults were present in western Pakistan from February to April but breeding did not occur due to drought conditions. Heavy rains associated with Cyclone Phet fell in coastal areas of southeastern Iran and western Pakistan on 4-5 June, extending to the summer breeding areas along the Indo-Pakistan border on 6-7 June.

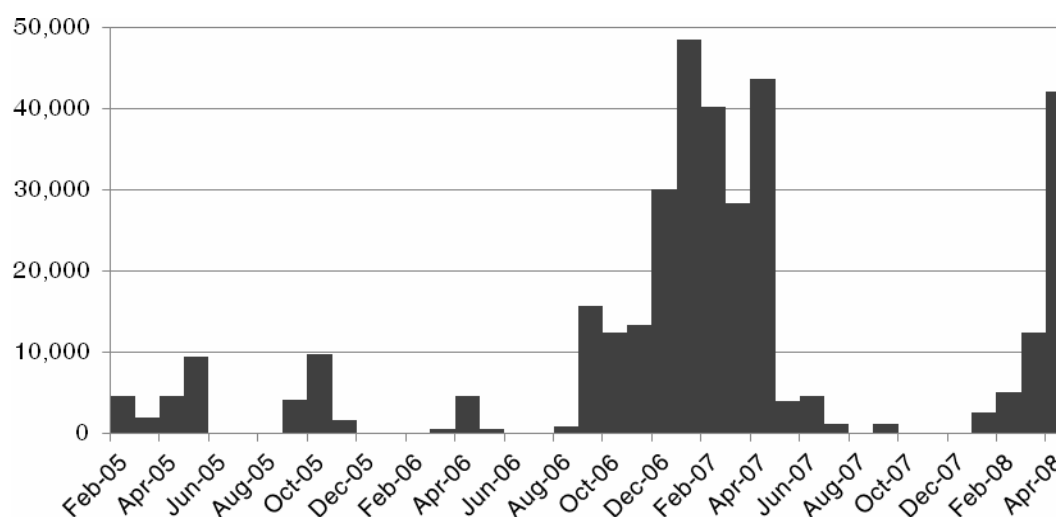
Summer 2010. Scattered mature adults appeared in late June in the Cholistan Desert of Pakistan. Breeding occurred from July to September as a result of good monsoon rains that fell along both sides of the Indo-Pakistan border. An outbreak developed in early October when locust numbers suddenly increased as a result of a second generation of hatching that gave rise to hopper groups and bands in both countries. Several immature swarms were also seen along the border. Control operations were

carried out in Pakistan (14,204 ha) and India (4,700 ha) from September to November, and no locusts were seen after December.

Spring 2011. Low numbers of immature and mature adults were present in a few coastal and interior areas of Baluchistan in western Pakistan. During April, small-scale breeding occurred in the interior of southeast Iran and in Baluchistan, Pakistan. Groups of solitarious and transiens hoppers and adults as well as a few hopper bands formed in May in northern Baluchistan. During June, a small swarm appeared in southeast Iran while hoppers and adults continued to form groups in northern Baluchistan. Locust numbers had declined by early July as a result of control operations in Iran (6,703 ha) and Pakistan (8,771 ha) and due to limited movements to the summer breeding areas along the Indo-Pakistan border.

Summer 2011. Mature solitarious adults appeared in late June near the Indian border in Cholistan, Pakistan, probably arriving from spring breeding areas in Baluchistan. Low numbers of adults were present along both sides of the Indo-Pakistan from June to October and one generation of limited breeding occurred.

Spring 2012. Isolated mature solitary adults were present at a few places on the Baluchistan coast from late January to March, and scattered adults were present in the northern interior in April.



Number of hectares treated from March 2009 to May 2012 by national control teams in locust-affected countries.