

## **FAO DESERT LOCUST SURVEY & CONTROL FORMS**

Forms completed during the Desert Locust joint survey in I.R. Iran and Pakistan are presented on the following pages. These were sent to the Desert Locust Information Service (DLIS) at FAO HQ, Rome shortly after completion of the survey for analysis.

**FAO DESERT LOCUST SURVEY AND CONTROL FORM**

Pakistan Iran Joint Desert Locust Survey 2000

Please send to FAO HQ by fax (+39-06-57055271) or email (eclo@fao.org)

(indicate appropriate information as required)

1 SURVEY STOP	1	2	3	4	5	6
1.1 Date	16.04.2000	16.04.2000	18.04.2000	18.04.2000	18.04.2000	18.04.2000
1.2 Name	Khoshab Hut	Qadirabad	Ramine	Leepar	Shomm	Bariss Dusht
1.3 Latitude (N)	2709 N	2708 N	2516 N	2516 N	2512 N	2510 N
1.4 Longitude (E or W)	6148 E	6134 E	6046 E	6048 E	6106 E	6108 E
<b>2 ECOLOGY</b>						
2.1 Area (ha) of survey	120	600	500	750	50	65
2.2 Habital (wadi, plains, dunes, crops)	Wadi	Wadi	Dunes	Dunes	Plain	Dunes
2.3 Date of last rain	29.03.2000	?03.2000	04.04.2000	04.04.2000	04.04.2000	04.04.2000
2.4 Rain amount(mm, Low Moderate Hi)	L M H ?	L M H ?	L M H ?	L M H ?	L M H ?	L M H ?
2.5 Vegetation (dry, greening, green, drying)	Dry	Dry	Dry	Dry	Dry	Dry
2.6 Vegetation density (Low Medium D)	L M D	L M D	L M D	L M D	L M D	L M D
2.7 Soil moisture (wet/dry)	W D	W D	W D	W D	W D	W D
<b>3 LOCUSTS</b>						
3.1 Present or absent	P A	P A	P A	P A	P A	P A
3.2 Area infested (ha)						
<b>4 HOPPERS</b>	N-A	N-A	N-A	N-A	N-A	N-A
4.1 Hopper stages (H 123456 F)	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F
4.2 Appearance (Solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
4.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
4.4 Hopper density (/site,/m2, Low Med High)						
<b>5 BANDS</b>	N-A	N-A	N-A	N-A	N-A	N-A
5.1 Band stages (H12345F)	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F
5.2 Band density (/m2 or Low Medium High)						
5.3 Band sizes (m2 or ha)						
5.4 Number of Bands						
<b>6 ADULTS</b>	N-A	N-A	N-A	N-A	N-A	N-A
6.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
6.2 Appearance (solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
6.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
6.4 Adult density (/transect,/ha, L M H)						
6.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
<b>7 SWARMS</b>	N-A	N-A	N-A	N-A	N-A	N-A
7.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
7.2 Swarm density (/m2 or Low Medium High)						
7.3 Swarm Size (km2 or ha)						
7.4 Number of swarms						
7.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
7.6 Flying (direction, time passing)						
7.7 Flying height ( Low Medium High)	L M H	L M H	L M H	L M H	L M H	L M H
<b>8 CONTROL</b>	N-A	N-A	N-A	N-A	N-A	N-A
8.1 Pesticide name & formulation						
8.2 Application rate (1/ha or kg/ha)						
8.3 Quantity (l)						
8.4 Area treated (ha)						
8.5 Ground or air	G A	G A	G A	G A	G A	G A
8.6 Estimated % kill						
<b>9 COMMENTS</b>						
9.1 Temperature * C	40	37	28	29	29	31
9.2 Relative Humidity %	27	28	54	54	64	63
9.3 Wind Direction	SW → NE	S → N	SE → NW	SE → NW	SE → NW	SE → NW
9.4 Last Locust control	Hopper control in 1983	Fledgling control in 1996 (100 ha)	Hopper control in 1998 (1300 ha)	-	Hopper & adult control in 1996	-
9.5	-	-	-	Veg in stream is semi green	-	-

Was a GPS used to determine locations? Yes

Is a brief interpretation or analysis of the results included? Yes

Country : Islamic Republic of Iran

Locust Officer: Zafar Ali & Safdar Ali

Date: 18/04/2000

**FAO DESERT LOCUST SURVEY AND CONTROL FORM**

Pakistan Iran Joint Desert Locust Survey 2000

Please send to FAO HQ by fax (+39-06-57055271) or email (eclo@fao.org)

*(indicate appropriate information as required)*

1 SURVEY STOP	1	2	3	4	5	6
1.1 Date	18.04.2000	18.04.2000	18.04.2000	19.04.2000	19.04.2000	19.04.2000
1.2 Name	Gawater	Briss	Dusht	Washnam I	Washnam II	Washnam III
1.3 Latitude (N)	2509 N	2506 N	2511 N	2523 N	2524 N	2523 N
1.4 Longitude (E or W)	6130 E	6116 E	6106 E	6045 E	6046 E	6047 E
<b>2 ECOLOGY</b>						
2.1 Area (ha) of survey	50	100	200	100	80	60
2.2 Habital (wadi, plains, dunes, crops)	Plain	Plain	Dunes	Sandy Plain	Plain	Crops
2.3 Date of last rain	? .04.2000	? .04.2000	? .04.2000	? .04.2000	? .04.2000	? .?.1998
2.4 Rain amount(mm, Low Moderate Hi)	L M H ?	L M H ?	L M H ?	L M H ?	L M H ?	L M H ?
2.5 Vegetation (dry, greening, green, drying)	Dry	Dry	Dry	Dry	Dry	Dry
2.6 Vegetation density (Low Medium D)	L M D	L M D	L M D	L M D	L M D	L M D
2.7 Soil moisture (wet/dry)	W D	W D	W D	W D	W D	W D
<b>3 LOCUSTS</b>						
3.1 Present or absent	P A	P A	P A	P A	P A	P A
3.2 Area infested (ha)						
<b>4 HOPPERS</b>	N-A	N-A	N-A	N-A	N-A	N-A
4.1 Hopper stages (H 123456 F)	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F
4.2 Appearance (Solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
4.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
4.4 Hopper density (/site,/m2, Low Med High)						
<b>5 BANDS</b>	N-A	N-A	N-A	N-A	N-A	N-A
5.1 Band stages (H12345F)	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F
5.2 Band density (/m2 or Low Medium High)						
5.3 Band sizes (m2 or ha)						
5.4 Number of Bands						
<b>6 ADULTS</b>	N-A	N-A	N-A	N-A	N-A	N-A
6.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
6.2 Appearance (solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
6.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
6.4 Adult density (/transect,/ha, L M H)						
6.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
<b>7 SWARMS</b>	N-A	N-A	N-A	N-A	N-A	N-A
7.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
7.2 Swarm density (/m2 or Low Medium High)						
7.3 Swarm Size (km2 or ha)						
7.4 Number of swarms						
7.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
7.6 Flying (direction, time passing)						
7.7 Flying height ( Low Medium High)	L M H	L M H	L M H	L M H	L M H	L M H
<b>8 CONTROL</b>	N-A	N-A	N-A	N-A	N-A	N-A
8.1 Pesticide name & formulation						
8.2 Application rate (1/ha or kg/ha)						
8.3 Quantity (l)						
8.4 Area treated (ha)						
8.5 Ground or air	G A	G A	G A	G A	G A	G A
8.6 Estimated % kill						
<b>9 COMMENTS</b>						
9.1 Temprature * C	32	35	36	30	33	32
9.2 Relative Humidity %	55	56	58	67	56	51
9.3 Wind Direction	S → N	SE → NW	SE → NW	SE → NW	SE → NW	SE → NW
9.4 Last Locust control	-	-	-	1996 (1000 ha.)	1996 (1000 ha.)	1996 (1000 ha.)
9.5		Whether cloudy	Whether cloudy	-	-	-

Was a GPS used to determine locations? Yes

Is a brief interpretation or analysis of the results included? Yes

Country : Islamic Republic of Iran

Locust Officer: Zafar Ali &amp; Safdar Ali

Date: 19/04/2000

**FAO DESERT LOCUST SURVEY AND CONTROL FORM**

Pakistan Iran Joint Desert Locust Survey 2000

Please send to FAO HQ by fax (+39-06-57055271) or email (eclo@fao.org)

(indicate appropriate information as required)

1 SURVEY STOP	1	2	3	4	5	6
1.1 Date	19.04.2000	20.04.2000	20.04.2000	20.04.2000	20.04.2000	20.04.2000
1.2 Name	Brigdar	Kahir	Rodar	Bir Bala	Bandini	Pushti
1.3 Latitude (N)	2526 N	2535 N	2534 N	2527 N	2528 N	2530 N
1.4 Longitude (E or W)	6042 E	6006 E	6003 E	5948 E	5935 E	5927 E
<b>2 ECOLOGY</b>						
2.1 Area (ha) of survey	65	50	70	25	15	30
2.2 Habital (wadi, plains, dunes, crops)	Plain	Dunes	Plain	Dunes	Plain	Dunes
2.3 Date of last rain	???.1998	???.1998	???.1998	???.1998	???.1998	???.1998
2.4 Rain amount(mm, Low Moderate Hi)	L (M) H ?	L (M) H ?	L (M) H ?	L (M) H ?	L (M) H ?	L (M) H ?
2.5 Vegetation (dry, greening, green, drying)	Dry	Dry	Dry	Dry	Dry	Dry
2.6 Vegetation density (Low Medium D)	L (M) D	L (M) D	L (M) D	L (M) D	L (M) D	L (M) D
2.7 Soil moisture (wet/dry)	W (D)	W (D)	W (D)	W (D)	W (D)	W (D)
<b>3 LOCUSTS</b>						
3.1 Present or absent	P (A)	P (A)	P (A)	P (A)	P (A)	P (A)
3.2 Area infested (ha)						
<b>4 HOPPERS</b>	N-A	N-A	N-A	N-A	N-A	N-A
4.1 Hopper stages (H 123456 F)	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F
4.2 Appearance (Solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
4.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
4.4 Hopper density (/site,/m2, Low Med High)						
<b>5 BANDS</b>	N-A	N-A	N-A	N-A	N-A	N-A
5.1 Band stages (H12345F)	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F
5.2 Band density (/m2 or Low Medium High)						
5.3 Band sizes (m2 or ha)						
5.4 Number of Bands						
<b>6 ADULTS</b>	N-A	N-A	N-A	N-A	N-A	N-A
6.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
6.2 Appearance (solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
6.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
6.4 Adult density (/transect,/ha, L M H)						
6.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
<b>7 SWARMS</b>	N-A	N-A	N-A	N-A	N-A	N-A
7.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
7.2 Swarm density (/m2 or Low Medium High)						
7.3 Swarm Size (km2 or ha)						
7.4 Number of swarms						
7.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
7.6 Flying (direction, time passing)						
7.7 Flying height ( Low Medium High)	L M H	L M H	L M H	L M H	L M H	L M H
<b>8 CONTROL</b>	N-A	N-A	N-A	N-A	N-A	N-A
8.1 Pesticide name & formulation						
8.2 Application rate (1/ha or kg/ha)						
8.3 Quantity (l)						
8.4 Area treated (ha)						
8.5 Ground or air	G A	G A	G A	G A	G A	G A
8.6 Estimated % kill						
<b>9 COMMENTS</b>						
9.1 Temperature * C	38	29	30	31	33	33
9.2 Relative Humidity %	50	80	71	67	62	49
9.3 Wind Direction	SE → NW	SE → NW	SE → NW	SE → NW	SE → NW	SE → NW
9.4 Last Locust control	1998	1998	-	1998	-	1998
9.5	Whether cloudy	-	-	-	-	-

Was a GPS used to determine locations? Yes

Is a brief interpretation or analysis of the results included? Yes

Country : Islamic Republic of Iran

Locust Officer: Zafar Ali & Safdar Ali

Date: 20/04/2000

**FAO DESERT LOCUST SURVEY AND CONTROL FORM**

Pakistan Iran Joint Desert Locust Survey 2000

Please send to FAO HQ by fax (+39-06-57055271) or email (eclo@fao.org)

(indicate appropriate information as required)

1 SURVEY STOP	1	2	3	4	5	6
1.1 Date	21.04.2000	21.04.2000	21.04.2000	21.04.2000	21.04.2000	21.04.2000
1.2 Name	Sadiga	Sadig	Kaki	95 km before Jask	Yakdar	Jask
1.3 Latitude (N)	2539 N	2541 N	2532 N	2544 N	2542 N	2540 N
1.4 Longitude (E or W)	5852 E	5842 E	5925 E	5840 E	5800 E	5747 E
<b>2 ECOLOGY</b>						
2.1 Area (ha) of survey	20	15	10	5	10	5
2.2 Habital (wadi, plains, dunes, crops)	Plain	Sandy Plain	Plain	Sandy Plain	Plain	Sandy Plain
2.3 Date of last rain	? 11.1999	? 11.1999	? 11.1999	? 11.1999	? 11.1999	? 11.1999
2.4 Rain amount (mm, Low Moderate Hi)	L M H ?	L M H ?	L M H ?	L M H ?	L M H ?	L M H ?
2.5 Vegetation (dry, greening, green, drying)	Dry	Dry	Dry	Dry	Dry	Dry
2.6 Vegetation density (Low Medium D)	L M D	L M D	L M D	L M D	L M D	L M D
2.7 Soil moisture (wet/dry)	W D	W D	W D	W D	W D	W D
<b>3 LOCUSTS</b>						
3.1 Present or absent	P A	P A	P A	P A	P A	P A
3.2 Area infested (ha)						
<b>4 HOPPERS</b>	N-A	N-A	N-A	N-A	N-A	N-A
4.1 Hopper stages (H 123456 F)	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F
4.2 Appearance (Solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
4.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
4.4 Hopper density (/site, /m2, Low Med High)						
<b>5 BANDS</b>	N-A	N-A	N-A	N-A	N-A	N-A
5.1 Band stages (H12345F)	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F
5.2 Band density (/m2 or Low Medium High)						
5.3 Band sizes (m2 or ha)						
5.4 Number of Bands						
<b>6 ADULTS</b>	N-A	N-A	N-A	N-A	N-A	N-A
6.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
6.2 Appearance (solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
6.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
6.4 Adult density (/transect, /ha, L M H)						
6.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
<b>7 SWARMS</b>	N-A	N-A	N-A	N-A	N-A	N-A
7.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
7.2 Swarm density (/m2 or Low Medium High)						
7.3 Swarm Size (km2 or ha)						
7.4 Number of swarms						
7.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
7.6 Flying (direction, time passing)						
7.7 Flying height ( Low Medium High)	L M H	L M H	L M H	L M H	L M H	L M H
<b>8 CONTROL</b>	N-A	N-A	N-A	N-A	N-A	N-A
8.1 Pesticide name & formulation						
8.2 Application rate (1/ha or kg/ha)						
8.3 Quantity (l)						
8.4 Area treated (ha)						
8.5 Ground or air	G A	G A	G A	G A	G A	G A
8.6 Estimated % kill						
<b>9 COMMENTS</b>						
9.1 Temperature * C	37	34	38	38	33	36
9.2 Relative Humidity %	48	47	52	43	40	50
9.3 Wind Direction	SE → NW	E → W	S → N	E → W	E → W	E → W
9.4 Last Locust control	-	-	-	-	-	-
9.5	Hot clear Sunny day	Hot clear Sunny day	Hot Sunny day	Hot day	-	-

Was a GPS used to determine locations? Yes

Is a brief interpretation or analysis of the results included? Yes

Country : Islamic Republic of Iran

Locust Officer: Zafar Ali & Safdar Ali

Date: 21/04/2000

**FAO DESERT LOCUST SURVEY AND CONTROL FORM**

Pakistan Iran Joint Desert Locust Survey 2000

Please send to FAO HQ by fax (+39-06-57055271) or email (eclo@fao.org)

(indicate appropriate information as required)

1 SURVEY STOP	1	2	3	4	5	6
1.1 Date	21.04.2000	21.04.2000	21.04.2000	22.04.2000	22.04.2000	22.04.2000
1.2 Name	Jask	Mishi	Sirik	Jaghin	Saras	Bargah
1.3 Latitude (N)	2543 N	2550 N	2642 N	2728 N	2731 N	2739 N
1.4 Longitude (E or W)	5748 E	5738 E	5704 E	5716 E	5732 E	5739 E
<b>2 ECOLOGY</b>						
2.1 Area (ha) of survey	10	6	15	10	8	10
2.2 Habital (wadi, plains, dunes, crops)	Dunes	Plain	Plain	Wadi	Crop-Wadi	Wadi
2.3 Date of last rain	?11.1999	?11.1999	?11.1999	?11.1999	?11.1999	?11.1999
2.4 Rain amount(mm, Low Moderate Hi)	L M H ?	L M H ?	L M H ?	L M H ?	L M H ?	L M H ?
2.5 Vegetation (dry, greening, green, drying)	Semi Green	Semi Green	Green	Green	Semi Green	Dry
2.6 Vegetation density (Low Medium D)	L M D	L M D	L M D	L M D	L M D	L M D
2.7 Soil moisture (wet/dry)	W D	W D	W D	W D	W D	W D
<b>3 LOCUSTS</b>						
3.1 Present or absent	P A	P A	P A	P A	P A	P A
3.2 Area infested (ha)						
<b>4 HOPPERS</b>	N-A	N-A	N-A	N-A	N-A	N-A
4.1 Hopper stages (H 123456 F)	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F
4.2 Appearance (Solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
4.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
4.4 Hopper density (/site,/m2, Low Med High)						
<b>5 BANDS</b>	N-A	N-A	N-A	N-A	N-A	N-A
5.1 Band stages (H12345F)	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F
5.2 Band density (/m2 or Low Medium High)						
5.3 Band sizes (m2 or ha)						
5.4 Number of Bands						
<b>6 ADULTS</b>	N-A	N-A	N-A	N-A	N-A	N-A
6.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
6.2 Appearance (solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
6.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
6.4 Adult density (/transect,/ha, L M H)						
6.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
<b>7 SWARMS</b>	N-A	N-A	N-A	N-A	N-A	N-A
7.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
7.2 Swarm density (/m2 or Low Medium High)						
7.3 Swarm Size (km2 or ha)						
7.4 Number of swarms						
7.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
7.6 Flying (direction, time passing)						
7.7 Flying height ( Low Medium High)	L M H	L M H	L M H	L M H	L M H	L M H
<b>8 CONTROL</b>	N-A	N-A	N-A	N-A	N-A	N-A
8.1 Pesticide name & formulation						
8.2 Application rate (1/ha or kg/ha)						
8.3 Quantity (l)						
8.4 Area treated (ha)						
8.5 Ground or air	G A	G A	G A	G A	G A	G A
8.6 Estimated % kill						
<b>9 COMMENTS</b>						
9.1 Temperature * C	36	38	35	38	36	33
9.2 Relative Humidity %	42	41	61	41	37	37
9.3 Wind Direction	E → W	SE → NW	S → N	SW → NE	W → E	W → E
9.4 Last Locust control	-	-	-	-	-	-
9.5	Hot clear day	Hot dry day	-	Other species of grass hoppers available	Orchards in 8 ha. Other species of grass hoppers available	-

Was a GPS used to determine locations? Yes

Is a brief interpretation or analysis of the results included? Yes

Country : Islamic Republic of Iran

Locust Officer: Zafar Ali & Safdar Ali

Date: 22/04/2000

**FAO DESERT LOCUST SURVEY AND CONTROL FORM**

Pakistan Iran Joint Desert Locust Survey 2000

Please send to FAO HQ by fax (+39-06-57055271) or email (eclo@fao.org)

(indicate appropriate information as required)

1 SURVEY STOP	1	2	3	4	5	6
1.1 Date	23.04.2000	23.04.2000	23.04.2000	23.04.2000	24.04.2000	24.04.2000
1.2 Name	Chah Lock	Chah Raza	Karkon	Solan	Shah Alvand I	Shah Alvand II
1.3 Latitude (N)	2725 N	2721 N	2710 N	2711 N	2733 N	2732 N
1.4 Longitude (E or W)	5756 E	5806 E	5831 E	5834 E	5918 E	5918 E
<b>2 ECOLOGY</b>						
2.1 Area (ha) of survey	15	10	20	30	25	10
2.2 Habital (wadi, plains, dunes, crops)	Plain	Crops	Dunes	Dunes	Dunes	Crops
2.3 Date of last rain	? .12.1999	? .12.1999	? .12.1999	? .01.2000	? .03.2000	? .03.2000
2.4 Rain amount(mm, Low Moderate Hi)	L M (H) ?	L M (H) ?	L M (H) ?	L M (H) ?	(L) M H ?	(L) M H ?
2.5 Vegetation (dry, greening, green, drying)	Drying	Drying	Drying	Drying	Dry	Green
2.6 Vegetation density (Low Medium D)	(L) M D	(L) M D	L (M) D	(L) M D	(L) M D	L M (D)
2.7 Soil moisture (wet/dry)	W (D)	W (D)	W (D)	W (D)	W (D)	(W) D
<b>3 LOCUSTS</b>						
3.1 Present or absent	P (A)	P (A)	P (A)	P (A)	P (A)	P (A)
3.2 Area infested (ha)						
<b>4 HOPPERS</b>	N-A	N-A	N-A	N-A	N-A	N-A
4.1 Hopper stages (H 123456 F)	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F
4.2 Appearance (Solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
4.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
4.4 Hopper density (/site,/m2, Low Med High)						
<b>5 BANDS</b>	N-A	N-A	N-A	N-A	N-A	N-A
5.1 Band stages (H12345F)	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F
5.2 Band density (/m2 or Low Medium High)						
5.3 Band sizes (m2 or ha)						
5.4 Number of Bands						
<b>6 ADULTS</b>	N-A	N-A	N-A	N-A	N-A	N-A
6.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
6.2 Appearance (solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
6.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
6.4 Adult density (/transect,/ha, L M H)						
6.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
<b>7 SWARMS</b>	N-A	N-A	N-A	N-A	N-A	N-A
7.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
7.2 Swarm density (/m2 or Low Medium High)						
7.3 Swarm Size (km2 or ha)						
7.4 Number of swarms						
7.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
7.6 Flying (direction, time passing)						
7.7 Flying height ( Low Medium High)	L M H	L M H	L M H	L M H	L M H	L M H
<b>8 CONTROL</b>	N-A	N-A	N-A	N-A	N-A	N-A
8.1 Pesticide name & formulation						
8.2 Application rate (1/ha or kg/ha)						
8.3 Quantity (l)						
8.4 Area treated (ha)						
8.5 Ground or air	G A	G A	G A	G A	G A	G A
8.6 Estimated % kill						
<b>9 COMMENTS</b>						
9.1 Temperature * C	42	42	44	45	42	44
9.2 Relative Humidity %	35	34	32	31	34	28
9.3 Wind Direction	W → E	W → E	NE → SW	NE → SW	W → E	W → E
9.4 Last Locust control	-	-	-	-	-	-
9.5	Clear Shining day	Hot Clear day Date palm Garden	-	-	-	-

Was a GPS used to determine locations? Yes

Is a brief interpretation or analysis of the results included? Yes

Country : Islamic Republic of Iran

Locust Officer: Zafar Ali & Safdar Ali

Date: 24/04/2000

**FAO DESERT LOCUST SURVEY AND CONTROL FORM**

Pakistan Iran Joint Desert Locust Survey 2000

Please send to FAO HQ by fax (+39-06-57055271) or email (eclo@fao.org)

(indicate appropriate information as required)

1 SURVEY STOP	1	2	3	4	5	6
1.1 Date	24.04.2000	24.04.2000	24.04.2000	24.04.2000	25.04.2000	25.04.2000
1.2 Name	Chah Muhammad	Gul Moorti	Shams Abad	Sardegal	Chah Draz	Espakeh I
1.3 Latitude (N)	2734 N	2730 N	2714 N	2714 N	2708 N	2707 N
1.4 Longitude (E or W)	5919 E	5928 E	6021 E	6024 E	6007 E	6002 E
<b>2 ECOLOGY</b>						
2.1 Area (ha) of survey	15	10	25	20	30	10
2.2 Habital (wadi, plains, dunes, crops)	Plain	Plain	Plain	Plain	Dunes	Dunes
2.3 Date of last rain	?3.2000	?3.2000	?3.2000	?3.2000	?3.2000	?3.2000
2.4 Rain amount(mm, Low Moderate Hi)	L M H ?	L M H ?	L M H ?	L M H ?	L M H ?	L M H ?
2.5 Vegetation (dry, greening, green, drying)	Drying	Dry	Dry	Dry	Dry	Dry
2.6 Vegetation density (Low Medium D)	L M D	L M D	L M D	L M D	L M D	L M D
2.7 Soil moisture (wet/dry)	W D	W D	W D	W D	W D	W D
<b>3 LOCUSTS</b>						
3.1 Present or absent	P A	P A	P A	P A	P A	P A
3.2 Area infested (ha)						
<b>4 HOPPERS</b>	N-A	N-A	N-A	N-A	N-A	N-A
4.1 Hopper stages (H 123456 F)	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F
4.2 Appearance (Solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
4.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
4.4 Hopper density (/site,/m2, Low Med High)						
<b>5 BANDS</b>	N-A	N-A	N-A	N-A	N-A	N-A
5.1 Band stages (H12345F)	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F
5.2 Band density (/m2 or Low Medium High)						
5.3 Band sizes (m2 or ha)						
5.4 Number of Bands						
<b>6 ADULTS</b>	N-A	N-A	N-A	N-A	N-A	N-A
6.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
6.2 Appearance (solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
6.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
6.4 Adult density (/transect,/ha, L M H)						
6.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
<b>7 SWARMS</b>	N-A	N-A	N-A	N-A	N-A	N-A
7.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
7.2 Swarm density (/m2 or Low Medium High)						
7.3 Swarm Size (km2 or ha)						
7.4 Number of swarms						
7.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
7.6 Flying (direction, time passing)						
7.7 Flying height ( Low Medium High)	L M H	L M H	L M H	L M H	L M H	L M H
<b>8 CONTROL</b>	N-A	N-A	N-A	N-A	N-A	N-A
8.1 Pesticide name & formulation						
8.2 Application rate (1/ha or kg/ha)						
8.3 Quantity (l)						
8.4 Area treated (ha)						
8.5 Ground or air	G A	G A	G A	G A	G A	G A
8.6 Estimated % kill						
<b>9 COMMENTS</b>						
9.1 Temperature * C	45	43	43	42	37	39
9.2 Relative Humidity %	30	30	29	29	35	35
9.3 Wind Direction	E → W	W → E	W → E	W → E	W → E	W → E
9.4 Last Locust control	-	-	Hopper control in 1997	-	1983	-
9.5	Hot clear Sunny day	-	-	Dry hot weather	Hot clear weather	Dry hot weather

Was a GPS used to determine locations? Yes

Is a brief interpretation or analysis of the results included? Yes

Country : Islamic Republic of Iran

Locust Officer: Zafar Ali & Safdar Ali

Date: 25/04/2000



**FAO DESERT LOCUST SURVEY AND CONTROL FORM**

Pakistan Iran Joint Desert Locust Survey 2000

Please send to FAO HQ by fax (+39-06-57055271) or email (eclo@fao.org)

(indicate appropriate information as required)

1 SURVEY STOP	1	2	3	4	5	6
1.1 Date	25.04.2000	25.04.2000	-	-	-	-
1.2 Name	Espakeh II	Espakeh III	-	-	-	-
1.3 Latitude (N)	2704 N	2658 N	-	-	-	-
1.4 Longitude (E or W)	6003 E	6008 E	-	-	-	-
<b>2 ECOLOGY</b>						
2.1 Area (ha) of survey	15	10	-	-	-	-
2.2 Habital (wadi, plains, dunes, crops)	Dunes	Plain	-	-	-	-
2.3 Date of last rain	?03.2000	?03.2000	-	-	-	-
2.4 Rain amount(mm, Low Moderate Hi)	L M H ?	L M H ?	L M H ?	L M H ?	L M H ?	L M H ?
2.5 Vegetation (dry, greening, green, drying)	Dry	Drying	-	-	-	-
2.6 Vegetation density (Low Medium D)	L M D	L M D	L M D	L M D	L M D	L M D
2.7 Soil moisture (wet/dry)	W D	W D	W D	W D	W D	W D
<b>3 LOCUSTS</b>						
3.1 Present or absent	P A	P A	P A	P A	P A	P A
3.2 Area infested (ha)						
<b>4 HOPPERS</b>	N-A	N-A	-	-	-	-
4.1 Hopper stages (H 123456 F)	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F
4.2 Appearance (Solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
4.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
4.4 Hopper density (/site,/m2, Low Med High)						
<b>5 BANDS</b>	N-A	N-A	-	-	-	-
5.1 Band stages (H12345F)	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F
5.2 Band density (/m2 or Low Medium High)						
5.3 Band sizes (m2 or ha)						
5.4 Number of Bands						
<b>6 ADULTS</b>	N-A	N-A	-	-	-	-
6.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
6.2 Appearance (solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
6.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
6.4 Adult density (/transect,/ha, L M H)						
6.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
<b>7 SWARMS</b>	N-A	N-A	-	-	-	-
7.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
7.2 Swarm density (/m2 or Low Medium High)						
7.3 Swarm Size (km2 or ha)						
7.4 Number of swarms						
7.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
7.6 Flying (direction, time passing)						
7.7 Flying height ( Low Medium High)	L M H	L M H	L M H	L M H	L M H	L M H
<b>8 CONTROL</b>	N-A	N-A	-	-	-	-
8.1 Pesticide name & formulation						
8.2 Application rate (1/ha or kg/ha)						
8.3 Quantity (l)						
8.4 Area treated (ha)						
8.5 Ground or air	G A	G A	G A	G A	G A	G A
8.6 Estimated % kill						
<b>9 COMMENTS</b>						
9.1 Temperature * C	39	40	-	-	-	-
9.2 Relative Humidity %	35	35	-	-	-	-
9.3 Wind Direction	SW → NE	SW → NE	-	-	-	-
9.4 Last Locust control	-	-	-	-	-	-
9.5		Hot clear weather	-	-	-	-

Was a GPS used to determine locations? Yes

Is a brief interpretation or analysis of the results included? Yes

Country : Islamic Republic of Iran

Locust Officer: Zafar Ali & Safdar Ali

Date: 25/04/2000

**FAO DESERT LOCUST SURVEY AND CONTROL FORM**

Pakistan Iran Joint Desert Locust Survey 2000

Please send to FAO HQ by fax (+39-06-57055271) or email (eclo@fao.org)

(indicate appropriate information as required)

1 SURVEY STOP	1	2	3	4	5	6
1.1 Date	29.04.2000	29.04.2000	29.04.2000	29.04.2000	29.04.2000	29.04.2000
1.2 Name	Dhak I	Dhak II	Dhak III	Dalbandin	Pishak	Noukcha
1.3 Latitude (N)	2846 N	2845 N	2845 N	2853 N	2857 N	2858 N
1.4 Longitude (E or W)	6260 E	6324 E	6369 N	6424 E	6435 E	6449 E
<b>2 ECOLOGY</b>						
2.1 Area (ha) of survey	12	25	30	10	15	10
2.2 Habital (wadi, plains, dunes, crops)	Plain	Plain	Plain	Crops	Dunes	Dunes
2.3 Date of last rain	?03.2000	?03.2000	?03.2000	?03.2000	?03.2000	?03.2000
2.4 Rain amount(mm, Low Moderate Hi)	L M H ?	L M H ?	L M H ?	L M H ?	L M H ?	L M H ?
2.5 Vegetation (dry, greening, green, drying)	Dry	Dry	Dry	Green	Dry	Dry
2.6 Vegetation density (Low Medium D)	L M D	L M D	L M D	L M D	L M D	L M D
2.7 Soil moisture (wet/dry)	W D	W D	W D	W D	W D	W D
<b>3 LOCUSTS</b>						
3.1 Present or absent	P A	P A	P A	P A	P A	P A
3.2 Area infested (ha)						
<b>4 HOPPERS</b>	N-A	N-A	N-A	N-A	N-A	N-A
4.1 Hopper stages (H 123456 F)	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F
4.2 Appearance (Solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
4.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
4.4 Hopper density (/site,/m2, Low Med High)						
<b>5 BANDS</b>	N-A	N-A	N-A	N-A	N-A	N-A
5.1 Band stages (H12345F)	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F
5.2 Band density (/m2 or Low Medium High)						
5.3 Band sizes (m2 or ha)						
5.4 Number of Bands						
<b>6 ADULTS</b>	N-A	N-A	N-A	N-A	N-A	N-A
6.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
6.2 Appearance (solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
6.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
6.4 Adult density (/transect,/ha, L M H)						
6.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
<b>7 SWARMS</b>	N-A	N-A	N-A	N-A	N-A	N-A
7.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
7.2 Swarm density (/m2 or Low Medium High)						
7.3 Swarm Size (km2 or ha)						
7.4 Number of swarms						
7.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
7.6 Flying (direction, time passing)						
7.7 Flying height ( Low Medium High)	L M H	L M H	L M H	L M H	L M H	L M H
<b>8 CONTROL</b>	N-A	N-A	N-A	N-A	N-A	N-A
8.1 Pesticide name & formulation						
8.2 Application rate (1/ha or kg/ha)						
8.3 Quantity (l)						
8.4 Area treated (ha)						
8.5 Ground or air	G A	G A	G A	G A	G A	G A
8.6 Estimated % kill						
<b>9 COMMENTS</b>						
9.1 Temperature * C	40	39	39	37	35	34
9.2 Relative Humidity %	32	36	36	35	34	34
9.3 Wind Direction	S → N	S → N	S → N	S → N	E → W	NE → SW
9.4 Last Locust control	-	-	-	-	-	-
9.5	-	-	-	-	-	Hilly areas air turbulence

Was a GPS used to determine locations? Yes

Is a brief interpretation or analysis of the results included? Yes

Country : Islamic Republic of Pakistan

Locust Officer: Zafar Ali & Safdar Ali

Date: 29/04/2000

**FAO DESERT LOCUST SURVEY AND CONTROL FORM**

Pakistan Iran Joint Desert Locust Survey 2000

Please send to FAO HQ by fax (+39-06-57055271) or email (eclo@fao.org)

(indicate appropriate information as required)

1 SURVEY STOP	1	2	3	4	5	6
1.1 Date	29.04.2000	30.04.2000	30.04.2000	30.04.2000	30.04.2000	30.04.2000
1.2 Name	Chhattar	Watto	Reko	Patkin	Barshonki	Bhoporag
1.3 Latitude (N)	2853 N	2928 N	2918 N	2904 N	2855 N	2834 N
1.4 Longitude (E or W)	6455 E	6559 E	6558 E	6548 E	6540 E	6519 E
<b>2 ECOLOGY</b>						
2.1 Area (ha) of survey	12	10	15	10	15	10
2.2 Habital (wadi, plains, dunes, crops)	Plain	Dunes	crops	Wadi	Plain	Dunes
2.3 Date of last rain	?3.2000	?3.2000	?3.2000	?01.2000	?01.2000	-
2.4 Rain amount(mm, Low Moderate Hi)	L M H ?	L M H ?	L M H ?	L M H ?	L M H ?	L M H ?
2.5 Vegetation (dry, greening, green, drying)	Dry	Dry	Green	Dry	Semi Green	Dry
2.6 Vegetation density (Low Medium D)	L M D	L M D	L M D	L M D	L M D	L M D
2.7 Soil moisture (wet/dry)	W D	W D	W D	W D	W D	W D
<b>3 LOCUSTS</b>						
3.1 Present or absent	P A	P A	P A	P A	P A	P A
3.2 Area infested (ha)						
<b>4 HOPPERS</b>	N-A	N-A	N-A	N-A	N-A	N-A
4.1 Hopper stages (H 123456 F)	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F
4.2 Appearance (Solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
4.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
4.4 Hopper density (/site,/m2, Low Med High)						
<b>5 BANDS</b>	N-A	N-A	N-A	N-A	N-A	N-A
5.1 Band stages (H12345F)	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F
5.2 Band density (/m2 or Low Medium High)						
5.3 Band sizes (m2 or ha)						
5.4 Number of Bands						
<b>6 ADULTS</b>	N-A	N-A	N-A	N-A	N-A	N-A
6.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
6.2 Appearance (solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
6.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
6.4 Adult density (/transect,/ha, L M H)						
6.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
<b>7 SWARMS</b>	N-A	N-A	N-A	N-A	N-A	N-A
7.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
7.2 Swarm density (/m2 or Low Medium High)						
7.3 Swarm Size (km2 or ha)						
7.4 Number of swarms						
7.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
7.6 Flying (direction, time passing)						
7.7 Flying height ( Low Medium High)	L M H	L M H	L M H	L M H	L M H	L M H
<b>8 CONTROL</b>	N-A	N-A	N-A	N-A	N-A	N-A
8.1 Pesticide name & formulation						
8.2 Application rate (1/ha or kg/ha)						
8.3 Quantity (l)						
8.4 Area treated (ha)						
8.5 Ground or air	G A	G A	G A	G A	G A	G A
8.6 Estimated % kill						
<b>9 COMMENTS</b>						
9.1 Temperature * C	33	33	33	37	37	39
9.2 Relative Humidity %	34	39	34	35	35	35
9.3 Wind Direction	E → W	NW → SE	SW → NE	SW → NE	SW → NE	S → N
9.4 Last Locust control	- Mountainian area	- Vegetation Semi Green in stream Air turbulence	-	- Mixed crops sandy area	-	- Severe drought. No rain fall

Was a GPS used to determine locations? Yes

Is a brief interpretation or analysis of the results included? Yes

Country : Islamic Republic of Pakistan

Locust Officer: Zafar Ali & Safdar Ali

Date: 30/04/2000

**FAO DESERT LOCUST SURVEY AND CONTROL FORM**

Pakistan Iran Joint Desert Locust Survey 2000

Please send to FAO HQ by fax (+39-06-57055271) or email (eclo@fao.org)

(indicate appropriate information as required)

1 SURVEY STOP	1	2	3	4	5	6
1.1 Date	30.04.2000	01.05.2000	01.05.2000	01.05.2000	01.05.2000	01.05.2000
1.2 Name	Gawashk	Naro I	Naro II	Phat	Naly	Garuk
1.3 Latitude (N)	2834 N	2821 N	2822 N	2823 N	2823 N	2826 N
1.4 Longitude (E or W)	6518 E	6535 E	6532 E	6530 E	6528 E	6541 E
<b>2 ECOLOGY</b>						
2.1 Area (ha) of survey	15	10	25	15	20	10
2.2 Habital (wadi, plains, dunes, crops)	Dunes	Dunes	Dunes	Dunes	Dunes	Crops
2.3 Date of last rain	?01.2000	?01.2000	?01.2000	?01.2000	?01.2000	?01.2000
2.4 Rain amount(mm, Low Moderate Hi)	L M H ?	L M H ?	L M H ?	L M H ?	L M H ?	L M H ?
2.5 Vegetation (dry, greening, green, drying)	Dry	Dry	Dry	Dry	Dry	Green
2.6 Vegetation density (Low Medium D)	L M D	L M D	L M D	L M D	L M D	L M D
2.7 Soil moisture (wet/dry)	W D	W D	W D	W D	W D	W D
<b>3 LOCUSTS</b>						
3.1 Present or absent	P A	P A	P A	P A	P A	P A
3.2 Area infested (ha)						
<b>4 HOPPERS</b>	N-A	N-A	N-A	N-A	N-A	N-A
4.1 Hopper stages (H 123456 F)	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F
4.2 Appearance (Solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
4.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
4.4 Hopper density (/site,/m2, Low Med High)						
<b>5 BANDS</b>	N-A	N-A	N-A	N-A	N-A	N-A
5.1 Band stages (H12345F)	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F
5.2 Band density (/m2 or Low Medium High)						
5.3 Band sizes (m2 or ha)						
5.4 Number of Bands						
<b>6 ADULTS</b>	N-A	N-A	N-A	N-A	N-A	N-A
6.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
6.2 Appearance (solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
6.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
6.4 Adult density (/transect,/ha, L M H)						
6.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
<b>7 SWARMS</b>	N-A	N-A	N-A	N-A	N-A	N-A
7.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
7.2 Swarm density (/m2 or Low Medium High)						
7.3 Swarm Size (km2 or ha)						
7.4 Number of swarms						
7.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
7.6 Flying (direction, time passing)						
7.7 Flying height ( Low Medium High)	L M H	L M H	L M H	L M H	L M H	L M H
<b>8 CONTROL</b>	N-A	N-A	N-A	N-A	N-A	N-A
8.1 Pesticide name & formulation						
8.2 Application rate (1/ha or kg/ha)						
8.3 Quantity (l)						
8.4 Area treated (ha)						
8.5 Ground or air	G A	G A	G A	G A	G A	G A
8.6 Estimated % kill						
<b>9 COMMENTS</b>						
9.1 Temperature * C	36	38	38	38	40	42
9.2 Relative Humidity %	35	37	36	35	35	35
9.3 Wind Direction	S → N	S → N	N → S	W → E	N → S	N → S
9.4 Last Locust control	1996	1996	1996	1996	1996	-
9.5	Loose heavy sandy dunes, cross country survey not possible					Hot clear weather

Was a GPS used to determine locations? Yes

Is a brief interpretation or analysis of the results included? Yes

Country : Islamic Republic of Pakistan

Locust Officer: Zafar Ali & Safdar Ali

Date: 01/05/2000

**FAO DESERT LOCUST SURVEY AND CONTROL FORM**

Pakistan Iran Joint Desert Locust Survey 2000

Please send to FAO HQ by fax (+39-06-57055271) or email (eclo@fao.org)

(indicate appropriate information as required)

1 SURVEY STOP	1	2	3	4	5	6
1.1 Date	02.05.2000	02.05.2000	02.05.2000	02.05.2000	02.05.2000	02.05.2000
1.2 Name	Dali	Basima area	Kuragai	Bagh	Naag I	Naag II
1.3 Latitude (N)	2816 N	2807 N	2803 N	2747 N	2724 N	2726 N
1.4 Longitude (E or W)	6541 E	6545 E	6546 E	6541 E	6510 E	6503 E
<b>2 ECOLOGY</b>						
2.1 Area (ha) of survey	10	15	10	10	10	20
2.2 Habital (wadi, plains, dunes, crops)	Wadi	Wadi	Plain	Wadi-Crops	Wadi	Plain Sandy
2.3 Date of last rain	-	01.05.2000	01.05.2000	01.05.2000	22.04.2000	22.04.2000
2.4 Rain amount(mm, Low Moderate Hi)	L M H ?	L M H ?	L M H ?	L M H ?	L M H ?	L M H ?
2.5 Vegetation (dry, greening, green, drying)	Dry	Dry	Dry	Dry	Dry	Dry
2.6 Vegetation density (Low Medium D)	L M D	L M D	L M D	L M D	L M D	L M D
2.7 Soil moisture (wet/dry)	W D	W D	W D	W D	W D	W D
<b>3 LOCUSTS</b>						
3.1 Present or absent	P A	P A	P A	P A	P A	P A
3.2 Area infested (ha)						
<b>4 HOPPERS</b>	N-A	N-A	N-A	N-A	N-A	N-A
4.1 Hopper stages (H 123456 F)	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F
4.2 Appearance (Solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
4.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
4.4 Hopper density (/site,/m2, Low Med High)						
<b>5 BANDS</b>	N-A	N-A	N-A	N-A	N-A	N-A
5.1 Band stages (H12345F)	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F
5.2 Band density (/m2 or Low Medium High)						
5.3 Band sizes (m2 or ha)						
5.4 Number of Bands						
<b>6 ADULTS</b>	N-A	N-A	N-A	N-A	N-A	N-A
6.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
6.2 Appearance (solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
6.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
6.4 Adult density (/transect,/ha, L M H)						
6.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
<b>7 SWARMS</b>	N-A	N-A	N-A	N-A	N-A	N-A
7.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
7.2 Swarm density (/m2 or Low Medium High)						
7.3 Swarm Size (km2 or ha)						
7.4 Number of swarms						
7.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
7.6 Flying (direction, time passing)						
7.7 Flying height ( Low Medium High)	L M H	L M H	L M H	L M H	L M H	L M H
<b>8 CONTROL</b>	N-A	N-A	N-A	N-A	N-A	N-A
8.1 Pesticide name & formulation						
8.2 Application rate (1/ha or kg/ha)						
8.3 Quantity (l)						
8.4 Area treated (ha)						
8.5 Ground or air	G A	G A	G A	G A	G A	G A
8.6 Estimated % kill						
<b>9 COMMENTS</b>						
9.1 Temperature * C	34	35	37	38	38	38
9.2 Relative Humidity %	38	38	37	36	37	31
9.3 Wind Direction	SE → NW	SE → NW	SE → NW	SE → NW	SE → NW	SE → NW
9.4 Last Locust control	-	-	1996	-	-	-
9.5	Seasonal water stream	Clear sunny day	-	-	Clear day	-

Was a GPS used to determine locations? Yes

Is a brief interpretation or analysis of the results included? Yes

Country : Islamic Republic of Pakistan

Locust Officer: Zafar Ali & Safdar Ali

Date: 02/05/2000

**FAO DESERT LOCUST SURVEY AND CONTROL FORM**

Pakistan Iran Joint Desert Locust Survey 2000

Please send to FAO HQ by fax (+39-06-57055271) or email (eclo@fao.org)

(indicate appropriate information as required)

1 SURVEY STOP	1	2	3	4	5	6
1.1 Date	02.05.2000	03.05.2000	03.05.2000	03.05.2000	03.05.2000	03.05.2000
1.2 Name	Kareechi	Chakkal	Bazar	Dharak Dhaph	Prome Jhain	Sir Prome
1.3 Latitude (N)	2720 N	2653 N	2652 N	2648 N	2642 N	2641 N
1.4 Longitude (E or W)	6451 E	6359 E	6357 E	6350 E	6325 E	6320 E
<b>2 ECOLOGY</b>						
2.1 Area (ha) of survey	20	25	20	15	10	20
2.2 Habital (wadi, plains, dunes, crops)	Plains sandy	Dunes	Dunes	Dunes	Plain	Plain
2.3 Date of last rain	?01.2000	?01.2000	?01.2000	22.04.2000	22.04.2000	22.04.2000
2.4 Rain amount(mm, Low Moderate Hi)	L M H ?	L M H ?	L M H ?	L M H ?	L M H ?	L M H ?
2.5 Vegetation (dry, greening, green, drying)	Dry	Dry	Dry	Dry	Greening	Greening
2.6 Vegetation density (Low Medium D)	L M D	L M D	L M D	L M D	L M D	L M D
2.7 Soil moisture (wet/dry)	W D	W D	W D	W D	W D	W D
<b>3 LOCUSTS</b>						
3.1 Present or absent	P A	P A	P A	P A	P A	P A
3.2 Area infested (ha)						
<b>4 HOPPERS</b>	N-A	N-A	N-A	N-A	N-A	N-A
4.1 Hopper stages (H 123456 F)	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F
4.2 Appearance (Solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
4.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
4.4 Hopper density (/site,/m2, Low Med High)						
<b>5 BANDS</b>	N-A	N-A	N-A	N-A	N-A	N-A
5.1 Band stages (H12345F)	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F
5.2 Band density (/m2 or Low Medium High)						
5.3 Band sizes (m2 or ha)						
5.4 Number of Bands						
<b>6 ADULTS</b>	N-A	N-A	N-A	N-A	N-A	N-A
6.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
6.2 Appearance (solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
6.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
6.4 Adult density (/transect,/ha, L M H)						
6.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
<b>7 SWARMS</b>	N-A	N-A	N-A	N-A	N-A	N-A
7.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
7.2 Swarm density (/m2 or Low Medium High)						
7.3 Swarm Size (km2 or ha)						
7.4 Number of swarms						
7.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
7.6 Flying (direction, time passing)						
7.7 Flying height ( Low Medium High)	L M H	L M H	L M H	L M H	L M H	L M H
<b>8 CONTROL</b>	N-A	N-A	N-A	N-A	N-A	N-A
8.1 Pesticide name & formulation						
8.2 Application rate (1/ha or kg/ha)						
8.3 Quantity (l)						
8.4 Area treated (ha)						
8.5 Ground or air	G A	G A	G A	G A	G A	G A
8.6 Estimated % kill						
<b>9 COMMENTS</b>						
9.1 Temperature * C	36	37	38	38	41	41
9.2 Relative Humidity %	38	39	38	38	36	37
9.3 Wind Direction	SE → NW	SW → NE	SW → NE	SW → NE	SW → NE	SE → NW
9.4 Last Locust control	Hopper control in 1994	-	-	-	-	-
9.5	-	-	Clear sunny day	Area along-with mountain	-	-

Was a GPS used to determine locations? Yes

Is a brief interpretation or analysis of the results included? Yes

Country : Islamic Republic of Pakistan

Locust Officer: Zafar Ali & Safdar Ali

Date: 03/05/2000

**FAO DESERT LOCUST SURVEY AND CONTROL FORM**

Pakistan Iran Joint Desert Locust Survey 2000

Please send to FAO HQ by fax (+39-06-57055271) or email (eclo@fao.org)

(indicate appropriate information as required)

1 SURVEY STOP	1	2	3	4	5	6
1.1 Date	03.05.2000	04.05.2000	04.05.2000	05.05.2000	05.05.2000	05.05.2000
1.2 Name	Alam baik Prome	Fateh Ali	Saidaan	Kaniani Kaur	Band Ghah	Sulaika I
1.3 Latitude (N)	2641 N	2644 N	2638 N	2555 N	2554 N	2553 N
1.4 Longitude (E or W)	6318 E	6403 E	6354 E	6247 E	6246 E	6245 E
<b>2 ECOLOGY</b>						
2.1 Area (ha) of survey	15	15	10	15	10	10
2.2 Habital (wadi, plains, dunes, crops)	Plain	Plain sandy	Plain sandy	Plain	Plain Wadi	Plain
2.3 Date of last rain	22.04.2000	?01.2000	?01.1999	-	?03.1999	?03.1999
2.4 Rain amount(mm, Low Moderate Hi)	L M <b>H</b> ?	<b>L</b> M H ?	<b>L</b> M H ?	<b>L</b> M H ?	<b>L</b> M H ?	<b>L</b> M H ?
2.5 Vegetation (dry, greening, green, drying)	Greening	Dry	Dry	Dry	Drying	Dry
2.6 Vegetation density (Low Medium D)	L M <b>D</b>	<b>L</b> M <b>D</b>	<b>L</b> M <b>D</b>	<b>L</b> M <b>D</b>	L <b>M</b> <b>D</b>	<b>L</b> M <b>D</b>
2.7 Soil moisture (wet/dry)	<b>W</b> <b>D</b>	W <b>D</b>	W <b>D</b>	W <b>D</b>	W <b>D</b>	W <b>D</b>
<b>3 LOCUSTS</b>						
3.1 Present or absent	P <b>A</b>	P <b>A</b>	P <b>A</b>	P <b>A</b>	P <b>A</b>	P <b>A</b>
3.2 Area infested (ha)						
<b>4 HOPPERS</b>	N-A	N-A	N-A	N-A	N-A	N-A
4.1 Hopper stages (H 123456 F)	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F
4.2 Appearance (Solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
4.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
4.4 Hopper density (/site,/m2, Low Med High)						
<b>5 BANDS</b>	N-A	N-A	N-A	N-A	N-A	N-A
5.1 Band stages (H12345F)	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F
5.2 Band density (/m2 or Low Medium High)						
5.3 Band sizes (m2 or ha)						
5.4 Number of Bands						
<b>6 ADULTS</b>	N-A	N-A	N-A	N-A	N-A	N-A
6.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
6.2 Appearance (solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
6.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
6.4 Adult density (/transect,/ha, L M H)						
6.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
<b>7 SWARMS</b>	N-A	N-A	N-A	N-A	N-A	N-A
7.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
7.2 Swarm density (/m2 or Low Medium High)						
7.3 Swarm Size (km2 or ha)						
7.4 Number of swarms						
7.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
7.6 Flying (direction, time passing)						
7.7 Flying height ( Low Medium High)	L M H	L M H	L M H	L M H	L M H	L M H
<b>8 CONTROL</b>	N-A	N-A	N-A	N-A	N-A	N-A
8.1 Pesticide name & formulation						
8.2 Application rate (1/ha or kg/ha)						
8.3 Quantity (l)						
8.4 Area treated (ha)						
8.5 Ground or air	G A	G A	G A	G A	G A	G A
8.6 Estimated % kill						
<b>9 COMMENTS</b>						
9.1 Temperature * C	41	36	38	38	39	39
9.2 Relative Humidity %	37	40	36	40	41	39
9.3 Wind Direction	SE ➔ NW	NW ➔ SE	NW ➔ SE	Turbulated wind	SW ➔ NE	SW ➔ NE
9.4 Last Locust control	-	-	-	-	-	Hopper control in 1990
9.5	-	Weather cloudy	Mountainian area	-	-	-

Was a GPS used to determine locations? Yes

Is a brief interpretation or analysis of the results included? Yes

Country : Islamic Republic of Pakistan

Locust Officer: Zafar Ali & Safdar Ali

Date: 05/05/2000

**FAO DESERT LOCUST SURVEY AND CONTROL FORM**

Pakistan Iran Joint Desert Locust Survey 2000

Please send to FAO HQ by fax (+39-06-57055271) or email (eclo@fao.org)

(indicate appropriate information as required)

1 SURVEY STOP	1	2	3	4	5	6
1.1 Date	05.05.2000	05.05.2000	05.05.2000	05.05.2000	06.05.2000	06.05.2000
1.2 Name	Sulaika II	Sulaika III	Sulaika IV	Waadh	Padarak	Garoki
1.3 Latitude (N)	2553 N	2553 N	2553 N	2552 N	2551 N	2541 N
1.4 Longitude (E or W)	6244 E	6243 E	6244 E	6244 E	6313 E	6319 E
<b>2 ECOLOGY</b>						
2.1 Area (ha) of survey	10	15	10	20	5	5
2.2 Habital (wadi, plains, dunes, crops)	Plain	Dunes	Dunes	Dunes	Crops	Wadi
2.3 Date of last rain	?03.1999	?03.1999	?03.1999	?03.1999	?03.1999	?03.1999
2.4 Rain amount(mm, Low Moderate Hi)	L M H ?	L M H ?	L M H ?	L M H ?	L M H ?	L M H ?
2.5 Vegetation (dry, greening, green, drying)	Dry	Dry	Dry	Dry	Drying	Dry
2.6 Vegetation density (Low Medium D)	L M D	L M D	L M D	L M D	L M D	L M D
2.7 Soil moisture (wet/dry)	W D	W D	W D	W D	W D	W D
<b>3 LOCUSTS</b>						
3.1 Present or absent	P A	P A	P A	P A	P A	P A
3.2 Area infested (ha)						
<b>4 HOPPERS</b>	N-A	N-A	N-A	N-A	N-A	N-A
4.1 Hopper stages (H 123456 F)	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F
4.2 Appearance (Solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
4.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
4.4 Hopper density (/site,/m2, Low Med High)						
<b>5 BANDS</b>	N-A	N-A	N-A	N-A	N-A	N-A
5.1 Band stages (H12345F)	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F
5.2 Band density (/m2 or Low Medium High)						
5.3 Band sizes (m2 or ha)						
5.4 Number of Bands						
<b>6 ADULTS</b>	N-A	N-A	N-A	N-A	N-A	N-A
6.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
6.2 Appearance (solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
6.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
6.4 Adult density (/transect,/ha, L M H)						
6.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
<b>7 SWARMS</b>	N-A	N-A	N-A	N-A	N-A	N-A
7.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
7.2 Swarm density (/m2 or Low Medium High)						
7.3 Swarm Size (km2 or ha)						
7.4 Number of swarms						
7.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
7.6 Flying (direction, time passing)						
7.7 Flying height ( Low Medium High)	L M H	L M H	L M H	L M H	L M H	L M H
<b>8 CONTROL</b>	N-A	N-A	N-A	N-A	N-A	N-A
8.1 Pesticide name & formulation						
8.2 Application rate (1/ha or kg/ha)						
8.3 Quantity (l)						
8.4 Area treated (ha)						
8.5 Ground or air	G A	G A	G A	G A	G A	G A
8.6 Estimated % kill						
<b>9 COMMENTS</b>						
9.1 Temperature * C	39	40	41	41.5	38	39.5
9.2 Relative Humidity %	40	40	37	36	44	43
9.3 Wind Direction	SW → NE	SW → NE	SW → NE	SW → NE	SE → NW	SE → NW
9.4 Last Locust control	Hopper control in 1990	Hopper control in 1990	Hopper control in 1990	-	-	-
9.5	Dust Storm	Hot clear day	Dust Storm	-	Hot clear weather	-

Was a GPS used to determine locations? Yes

Is a brief interpretation or analysis of the results included? Yes

Country : Islamic Republic of Pakistan

Locust Officer: Zafar Ali & Safdar Ali

Date: 06/05/2000



**FAO DESERT LOCUST SURVEY AND CONTROL FORM**

Pakistan Iran Joint Desert Locust Survey 2000

Please send to FAO HQ by fax (+39-06-57055271) or email (eclo@fao.org)

(indicate appropriate information as required)

1 SURVEY STOP	1	2	3	4	5	6
1.1 Date	06.05.2000	06.05.2000	06.05.2000	07.05.2000	07.05.2000	07.05.2000
1.2 Name	Bhari I	Bhari II	Tumpgi	Shadi Kour	Brangoli	Romra
1.3 Latitude (N)	2534 N	2533 N	2526 N	2524 N	2526 N	2523 N
1.4 Longitude (E or W)	6324 E	6325 E	6325 E	6328 E	6340 E	6342 E
<b>2 ECOLOGY</b>						
2.1 Area (ha) of survey	20	15	15	10	10	25
2.2 Habital (wadi, plains, dunes, crops)	Wadi	Wadi	Wadi/Dunes	Dunes	Wadi	Dunes
2.3 Date of last rain	?03.1992	?03.1992	??.1998	??.1998	??.1998	??.1998
2.4 Rain amount(mm, Low Moderate Hi)	L M H ?	L M H ?	L M H ?	L M H ?	L M H ?	L M H ?
2.5 Vegetation (dry, greening, green, drying)	Dry	Drying	Dry	Dry	Dry	Drying
2.6 Vegetation density (Low Medium D)	L (M) D	L (M) D	L (M) D	L (M) D	L (M) D	L (M) D
2.7 Soil moisture (wet/dry)	W (D)	W (D)	W (D)	W (D)	W (D)	W (D)
<b>3 LOCUSTS</b>						
3.1 Present or absent	P (A)	P (A)	P (A)	P (A)	P (A)	P (A)
3.2 Area infested (ha)						
<b>4 HOPPERS</b>	N-A	N-A	N-A	N-A	N-A	N-A
4.1 Hopper stages (H 123456 F)	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F
4.2 Appearance (Solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
4.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
4.4 Hopper density (/site,/m2, Low Med High)						
<b>5 BANDS</b>	N-A	N-A	N-A	N-A	N-A	N-A
5.1 Band stages (H12345F)	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F
5.2 Band density (/m2 or Low Medium High)						
5.3 Band sizes (m2 or ha)						
5.4 Number of Bands						
<b>6 ADULTS</b>	N-A	N-A	N-A	N-A	N-A	N-A
6.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
6.2 Appearance (solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
6.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
6.4 Adult density (/transect,/ha, L M H)						
6.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
<b>7 SWARMS</b>	N-A	N-A	N-A	N-A	N-A	N-A
7.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
7.2 Swarm density (/m2 or Low Medium High)						
7.3 Swarm Size (km2 or ha)						
7.4 Number of swarms						
7.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
7.6 Flying (direction, time passing)						
7.7 Flying height ( Low Medium High)	L M H	L M H	L M H	L M H	L M H	L M H
<b>8 CONTROL</b>	N-A	N-A	N-A	N-A	N-A	N-A
8.1 Pesticide name & formulation						
8.2 Application rate (1/ha or kg/ha)						
8.3 Quantity (l)						
8.4 Area treated (ha)						
8.5 Ground or air	G A	G A	G A	G A	G A	G A
8.6 Estimated % kill						
<b>9 COMMENTS</b>						
9.1 Temperature * C	40	42	42	33	38.5	34
9.2 Relative Humidity %	42	37	36	52	44	54
9.3 Wind Direction	SW → NE	SW → NE	SW → NE	SW → NE	SW → NE	SW → NE
9.4 Last Locust control	-	-	-	-	-	-
9.5	Clear Sunny day	-	Air turbunate	Acute water shortage in the area	-	Sea Shore clear day

Was a GPS used to determine locations? Yes

Is a brief interpretation or analysis of the results included? Yes

Country : Islamic Republic of Pakistan

Locust Officer: Zafar Ali & Safdar Ali

Date: 07/05/2000

**FAO DESERT LOCUST SURVEY AND CONTROL FORM**

Pakistan Iran Joint Desert Locust Survey 2000

Please send to FAO HQ by fax (+39-06-57055271) or email (eclo@fao.org)

(indicate appropriate information as required)

1 SURVEY STOP	1	2	3	4	5	6
1.1 Date	07.05.2000	07.05.2000	07.05.2000	07.05.2000	07.05.2000	08.05.2000
1.2 Name	Sunnadi	Ispiak	Sunnari	Bal	Kalmat	Pasni
1.3 Latitude (N)	2523 N	2524 N	2523 N	2522 N	2521 N	2512 N
1.4 Longitude (E or W)	6344 E	6346 E	6348 E	6352 E	6352 E	6326 E
<b>2 ECOLOGY</b>						
2.1 Area (ha) of survey	30	20	15	25	20	10
2.2 Habital (wadi, plains, dunes, crops)	Dunes	Dunes	Dunes	Dunes	Plain	Plain
2.3 Date of last rain	???.2000	???.2000	???.2000	???.2000	???.2000	???.2000
2.4 Rain amount(mm, Low Moderate Hi)	L M H ?	L M H ?	L M H ?	L M H ?	L M H ?	L M H ?
2.5 Vegetation (dry, greening, green, drying)	Drying	Semi Green	Semi Green	Drying	Drying	Drying
2.6 Vegetation density (Low Medium D)	L M D	L M D	L M D	L M D	L M D	L M D
2.7 Soil moisture (wet/dry)	W D	W D	W D	W D	W D	W D
<b>3 LOCUSTS</b>						
3.1 Present or absent	P A	P A	P A	P A	P A	P A
3.2 Area infested (ha)						
<b>4 HOPPERS</b>	N-A	N-A	N-A	N-A	N-A	N-A
4.1 Hopper stages (H 123456 F)	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F
4.2 Appearance (Solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
4.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
4.4 Hopper density (/site,/m2, Low Med High)						
<b>5 BANDS</b>	N-A	N-A	N-A	N-A	N-A	N-A
5.1 Band stages (H12345F)	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F
5.2 Band density (/m2 or Low Medium High)						
5.3 Band sizes (m2 or ha)						
5.4 Number of Bands						
<b>6 ADULTS</b>	N-A	N-A	N-A	N-A	N-A	N-A
6.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
6.2 Appearance (solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
6.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
6.4 Adult density (/transect,/ha, L M H)						
6.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
<b>7 SWARMS</b>	N-A	N-A	N-A	N-A	N-A	N-A
7.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
7.2 Swarm density (/m2 or Low Medium High)						
7.3 Swarm Size (km2 or ha)						
7.4 Number of swarms						
7.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
7.6 Flying (direction, time passing)						
7.7 Flying height ( Low Medium High)	L M H	L M H	L M H	L M H	L M H	L M H
<b>8 CONTROL</b>	N-A	N-A	N-A	N-A	N-A	N-A
8.1 Pesticide name & formulation						
8.2 Application rate (1/ha or kg/ha)						
8.3 Quantity (l)						
8.4 Area treated (ha)						
8.5 Ground or air	G A	G A	G A	G A	G A	G A
8.6 Estimated % kill						
<b>9 COMMENTS</b>						
9.1 Temperature * C	34.5	35	35	34	31	30.5
9.2 Relative Humidity %	53	48	52	56	56	70
9.3 Wind Direction	SW → NE	SW → NE	SW → NE	SW → NE	SW → NE	Static
9.4 Last Locust control	-	-	-	-	-	-
9.5	Hot clear day potential area for breeding	Vegetaioion as in other coastal belts	-	-	Countinuous air from sea	Clear sunny day

Was a GPS used to determine locations? Yes

Is a brief interpretation or analysis of the results included? Yes

Country : Islamic Republic of Pakistan

Locust Officer: Zafar Ali & Safdar Ali

Date: 08/05/2000

**FAO DESERT LOCUST SURVEY AND CONTROL FORM**

Pakistan Iran Joint Desert Locust Survey 2000

Please send to FAO HQ by fax (+39-06-57055271) or email (eclo@fao.org)

(indicate appropriate information as required)

1 SURVEY STOP	1	2	3	4	5	6
1.1 Date	08.05.2000	08.05.2000	08.05.2000	08.05.2000	08.05.2000	08.05.2000
1.2 Name	Shezani	Sar Dusht	Gorach	Kalag	Wanday Nagore	Karwat
1.3 Latitude (N)	2521 N	2526 N	2527 N	2527 N	2525 N	2517 N
1.4 Longitude (E or W)	6314 E	6311 E	6303 E	6255 E	6251 E	6236 E
<b>2 ECOLOGY</b>						
2.1 Area (ha) of survey	10	20	15	20	10	15
2.2 Habital (wadi, plains, dunes, crops)	Plain	Dunes	Wadi	Dunes	Crops/Plain	Plain
2.3 Date of last rain	?03.1999	?03.1999	?03.1999	?03.1999	?03.1999	?03.1999
2.4 Rain amount(mm, Low Moderate Hi)	L M H ?	L M H ?	L M H ?	L M H ?	L M H ?	L M H ?
2.5 Vegetation (dry, greening, green, drying)	Dry	Dry	Drying	Drying	Dry	Dry
2.6 Vegetation density (Low Medium D)	L M D	L M D	L M D	L M D	L M D	L M D
2.7 Soil moisture (wet/dry)	W D	W D	W D	W D	W D	W D
<b>3 LOCUSTS</b>						
3.1 Present or absent	P A	P A	P A	P A	P A	P A
3.2 Area infested (ha)						
<b>4 HOPPERS</b>	N-A	N-A	N-A	N-A	N-A	N-A
4.1 Hopper stages (H 123456 F)	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F
4.2 Appearance (Solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
4.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
4.4 Hopper density (/site,/m2, Low Med High)						
<b>5 BANDS</b>	N-A	N-A	N-A	N-A	N-A	N-A
5.1 Band stages (H12345F)	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F
5.2 Band density (/m2 or Low Medium High)						
5.3 Band sizes (m2 or ha)						
5.4 Number of Bands						
<b>6 ADULTS</b>	N-A	N-A	N-A	N-A	N-A	N-A
6.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
6.2 Appearance (solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
6.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
6.4 Adult density (/transect,/ha, L M H)						
6.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
<b>7 SWARMS</b>	N-A	N-A	N-A	N-A	N-A	N-A
7.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
7.2 Swarm density (/m2 or Low Medium High)						
7.3 Swarm Size (km2 or ha)						
7.4 Number of swarms						
7.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
7.6 Flying (direction, time passing)						
7.7 Flying height ( Low Medium High)	L M H	L M H	L M H	L M H	L M H	L M H
<b>8 CONTROL</b>	N-A	N-A	N-A	N-A	N-A	N-A
8.1 Pesticide name & formulation						
8.2 Application rate (1/ha or kg/ha)						
8.3 Quantity (l)						
8.4 Area treated (ha)						
8.5 Ground or air	G A	G A	G A	G A	G A	G A
8.6 Estimated % kill						
<b>9 COMMENTS</b>						
9.1 Temperature * C	32.5	34.5	36	39	38.5	32
9.2 Relative Humidity %	66	50	48	49	45	62
9.3 Wind Direction	SW → NE	SW → NE	SW → NE	SW → NE	SW → NE	SW → NE
9.4 Last Locust control	-	-	-	-	-	-
9.5	-	Topography changed	Clear weather	Sea Weeds abundant	Air turbulance in area	-

Was a GPS used to determine locations? Yes

Is a brief interpretation or analysis of the results included? Yes

Country : Islamic Republic of Pakistan

Locust Officer: Zafar Ali & Safdar Ali

Date: 08/05/2000

**FAO DESERT LOCUST SURVEY AND CONTROL FORM**

Pakistan Iran Joint Desert Locust Survey 2000

Please send to FAO HQ by fax (+39-06-57055271) or email (eclo@fao.org)

(indicate appropriate information as required)

1 SURVEY STOP	1	2	3	4	5	6
1.1 Date	09.05.2000	09.05.2000	09.05.2000	09.05.2000	09.05.2000	10.05.2000
1.2 Name	Groke	Saijee	Shooli I	Shooli II	Chatti	Malhar
1.3 Latitude (N)	2518 N	2526 N	2535 N	2535 N	2537 N	2607 N
1.4 Longitude (E or W)	6212 E	6202 E	6207 E	6208 E	6215 E	6421 E
<b>2 ECOLOGY</b>						
2.1 Area (ha) of survey	20	10	25	20	10	10
2.2 Habital (wadi, plains, dunes, crops)	Dunes	Dunes	Dunes	Dunes	Dunes	Plain
2.3 Date of last rain	?? 1998	?? 1998	?? 1998	?? 1998	?? 1998	05.05.2000
2.4 Rain amount(mm, Low Moderate Hi)	L M H ?	L M H ?	L M H ?	L M H ?	L M H ?	L M H ?
2.5 Vegetation (dry, greening, green, drying)	Dry	Dry	Dry	Dry	Dry	Greening
2.6 Vegetation density (Low Medium D)	L M D	L M D	L M D	L M D	L M D	L M D
2.7 Soil moisture (wet/dry)	W D	W D	W D	W D	W D	W D
<b>3 LOCUSTS</b>						
3.1 Present or absent	P A	P A	P A	P A	P A	P A
3.2 Area infested (ha)						
<b>4 HOPPERS</b>	N-A	N-A	N-A	N-A	N-A	N-A
4.1 Hopper stages (H 123456 F)	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F
4.2 Appearance (Solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
4.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
4.4 Hopper density (/site,/m2, Low Med High)						
<b>5 BANDS</b>	N-A	N-A	N-A	N-A	N-A	N-A
5.1 Band stages (H12345F)	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F
5.2 Band density (/m2 or Low Medium High)						
5.3 Band sizes (m2 or ha)						
5.4 Number of Bands						
<b>6 ADULTS</b>	N-A	N-A	N-A	N-A	N-A	N-A
6.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
6.2 Appearance (solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
6.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
6.4 Adult density (/transect,/ha, L M H)						
6.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
<b>7 SWARMS</b>	N-A	N-A	N-A	N-A	N-A	N-A
7.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
7.2 Swarm density (/m2 or Low Medium High)						
7.3 Swarm Size (km2 or ha)						
7.4 Number of swarms						
7.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
7.6 Flying (direction, time passing)						
7.7 Flying height ( Low Medium High)	L M H	L M H	L M H	L M H	L M H	L M H
<b>8 CONTROL</b>	N-A	N-A	N-A	N-A	N-A	N-A
8.1 Pesticide name & formulation						
8.2 Application rate (1/ha or kg/ha)						
8.3 Quantity (l)						
8.4 Area treated (ha)						
8.5 Ground or air	G A	G A	G A	G A	G A	G A
8.6 Estimated % kill						
<b>9 COMMENTS</b>						
9.1 Temperature * C	31.5	34	39	39	39	35
9.2 Relative Humidity %	80	50	44	46	42	50
9.3 Wind Direction	SE → NW	SE → NW	SE → NW	SE → NW	SE → NW	Static
9.4 Last Locust control	-	-	Hopper control in 1996	Hopper control in 1996	-	-
9.5	Hot & clear sunny day	-	-	-	-	-

Was a GPS used to determine locations? Yes

Is a brief interpretation or analysis of the results included? Yes

Country : Islamic Republic of Pakistan

Locust Officer: Zafar Ali & Safdar Ali

Date: 10/05/2000

**FAO DESERT LOCUST SURVEY AND CONTROL FORM**

Pakistan Iran Joint Desert Locust Survey 2000

Please send to FAO HQ by fax (+39-06-57055271) or email (eclo@fao.org)

(indicate appropriate information as required)

1 SURVEY STOP	1	2	3	4	5	6
1.1 Date	10.05.2000	10.05.2000	10.05.2000	-	-	-
1.2 Name	Awaran	Nok Daira	Bundaki	-	-	-
1.3 Latitude (N)	2628 N	2542 N	2650 N	-	-	-
1.4 Longitude (E or W)	6511 E	6523 E	6524 E	-	-	-
<b>2 ECOLOGY</b>						
2.1 Area (ha) of survey	10	100	15	-	-	-
2.2 Habital (wadi, plains, dunes, crops)	Plain	Wadi/Crops	Wadi	-	-	-
2.3 Date of last rain	05.05.2000	05.05.2000	05.05.2000	-	-	-
2.4 Rain amount(mm, Low Moderate Hi)	L M H ?	L M H ?	L M H ?	L M H ?	L M H ?	L M H ?
2.5 Vegetation (dry, greening, green, drying)	greening	green	greening			
2.6 Vegetation density (Low Medium D)	L M D	L M D	L M D	L M D	L M D	L M D
2.7 Soil moisture (wet/dry)	W D	W D	W D	W D	W D	W D
<b>3 LOCUSTS</b>						
3.1 Present or absent	P A	P A	P A	P A	P A	P A
3.2 Area infested (ha)						
<b>4 HOPPERS</b>	N-A	N-A	N-A	-	-	-
4.1 Hopper stages (H 123456 F)	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F	H 1 2 3 4 5 6 F
4.2 Appearance (Solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
4.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
4.4 Hopper density (/site,/m2, Low Med High)						
<b>5 BANDS</b>	N-A	N-A	N-A	-	-	-
5.1 Band stages (H12345F)	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F	H 1 2 3 4 5 F
5.2 Band density (/m2 or Low Medium High)						
5.3 Band sizes (m2 or ha)						
5.4 Number of Bands						
<b>6 ADULTS</b>	N-A	N-A	N-A	-	-	-
6.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
6.2 Appearance (solitary, transiens, greg)	S T G	S T G	S T G	S T G	S T G	S T G
6.3 Behaviour (isolated, scattered, grou)	I S G	I S G	I S G	I S G	I S G	I S G
6.4 Adult density (/transect,/ha, L M H)						
6.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
<b>7 SWARMS</b>	N-A	N-A	N-A	-	-	-
7.1 Maturity (immature, mature)	I M	I M	I M	I M	I M	I M
7.2 Swarm density (/m2 or Low Medium High)						
7.3 Swarm Size (km2 or ha)						
7.4 Number of swarms						
7.5 Breeding (copulating, laying)	C L	C L	C L	C L	C L	C L
7.6 Flying (direction, time passing)						
7.7 Flying height ( Low Medium High)	L M H	L M H	L M H	L M H	L M H	L M H
<b>8 CONTROL</b>	N-A	N-A	N-A	-	-	-
8.1 Pesticide name & formulation						
8.2 Application rate (1/ha or kg/ha)						
8.3 Quantity (l)						
8.4 Area treated (ha)						
8.5 Ground or air	G A	G A	G A	G A	G A	G A
8.6 Estimated % kill						
<b>9 COMMENTS</b>						
9.1 Temperature * C	43	42	42	-	-	-
9.2 Relative Humidity %	42	40	39	-	-	-
9.3 Wind Direction	E → W	-	SE → NW	-	-	-
9.4 Last Locust control	-	-	-	-	-	-
9.5	Spotted rainfall on 05.05.2000	Irrigated land motor survey	-	-	-	-

Was a GPS used to determine locations? Yes

Is a brief interpretation or analysis of the results included? Yes

Country : Islamic Republic of Pakistan

Locust Officer: Zafar Ali & Safdar Ali

Date: 10/05/2000