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VETERINARY PRODUCTS
אסיא מעברות בעמ
תוצרים וטרינריים

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TREATMENT FOR REPELLING BIRDS AT BEN GURION (LOD) INTERNATIONAL AIRPORT, ISRAEL

The series of anti-bird treatments by Reta Bird Repellent during 1976/77, was based on results of two previous winter trial campaigns carried out at Ben Gurion Airport in 1974/75 and 1975/76.

The programme consisted of:

a) Spraying the landstrips bordering the main runways, in order to repel birds constituting a potential hazard to planes during takeoff or landing. This was carried out during both winter and summer.

b) experimental treatments of spraying a section of the runway to prevent gulls and lapwings from settling there.

As mentioned in previous reports, the principal species of birds who constitute the greatest hazards during takeoff and landing in Ben Gurion Airport, are gulls, partridges and lapwings during the winter months, and partridges and turtledoves during the summer.

1. TREATMENTS

a) Winter Treatment: December to February

Four standard treatments were carried out on the landstrips bordering either side of the 3 main runways. The width of each of these landstrips is 50/60 metres.

The area bordering the 4000 metre runway (08-26) was treated three times at monthly intervals, as were the areas bordering the 3500 metre runway (12-30). However, the 1700 metre north/south runway (21-03) was treated only once, in December, and on the west side only. All these treatments were carried out in the rainy season in winter, although the actual days chosen were sunny, dry and windless.

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The first treatment in December was started using a tractor and ground sprayer, but after a break of a couple of days, it was completed by a Bell 47 helicopter. For air security considerations and because of the greater competence of the helicopter crew, we decided it would be preferable to complete the summer and winter treatments by helicopter.

We used 30 kilos of Reta Bird Repellent per hectare. This was mixed in 550 litres of water for the ground treatment, and in 180 litres for the aerial treatment.

b) Summer Treatment

On July 11, the landstrips bordering runway 30-26 were treated in exactly the same manner as during the winter.

c) Treatment of a Section of the Runway

On certain days in the winter, large quantities of seagulls, ranging from a few hundred up to 3000/4000, land on the runways transforming them into 'meeting places' (Prof. A Zahavi). It appears that the seagulls favour special sections of the runway, namely the east and west extremities of the long runway 26-08. In addition, there are always a number of lapwings - up to 200 - on the western extremity. They come to rest on the runways after having finished their morning feeding activities.

The western extremity of this runway was treated on February 14th over a length of 700 metres and a width of 75 metres, with a higher rate of Reta (200 kilos per hectare).

2. OBSERVATIONS

a) Winter Treatment

Behaviour of Partridges: From December 11 to the end of March, these almost entirely disappeared from the treated area. In addition, none were observed crossing the runway.

However, on runway 03-21, which was treated only once at the beginning of December, partridges were observed crossing the runway from the middle of January. This usually happened before 8.30 in the morning.

Behaviour of Lapwings: The number of lapwings in the treated area was reduced drastically. Apparently, their sensitivity to noise was also increased. We had already observed this phenomenon during our trials on seagulls the previous year. During take-off of jet aircraft, they rise much earlier and so have sufficient time to assess in which direction the danger lies. They then leave the runway area immediately.

Before treatment, they would take flight at the last possible moment and fly out in all directions in a haphazard manner. Some would actually cross the runway in front of the very plane that was disturbing them.

During the whole period of the winter treatment (December to the first half of March) there was only one bird strike, and this was during the landing of a Viscount which came down before the actual beginning of runway 30, between two lateral entrances. This was an untreated place almost opposite to the terminal.

b) Summer Treatment

Behaviour of Partridges: Their behaviour after treatment in summer was identical to the winter pattern.

Behaviour of Turtledoves: After treatment, up to the middle of August, their behaviour during take-off of planes followed the same pattern as the lapwings, their reactions being even sharper.

During this five week period, from 11th July to 16th August, there was not one single bird strike. After that date we observed the following.

On the 16th August, there was a sudden increase in the number of turtledoves on the treated areas, along with changes in their behaviour. They reverted back to previous behaviour patterns established before treatment, and when the planes took off they flew about in a haphazard manner in all directions.

On August 18th, partridges again appeared on the treated areas.

On the 18th August there was a strike of 5 turtledoves with a 707 aircraft immediately after take-off. On 19th August there was a strike between 1 turtledove and a 707, and on 25th August, there were two strikes between 707's and single turtledoves. On September 12th, there was a strike between 12 partridges and a plane. Apparently the birds collided with the main landing gear.

c) Treatment on the runway itself

After treatment, not one bird remained on the section - neither gull nor lapwing - and the area remained quite clear until the end of March/beginning of April, when they migrated north.

A more detailed subsequent survey showed that the treatment appeared to be efficacious against lapwings, as although they did not return to the treated areas, they remained on the untreated section.

The gulls too did not return to the treated areas. However they were also not to be found on the untreated areas either. As the behaviour of the gulls was inconstant before treatment, we cannot after only one test, draw definite conclusions from their subsequent absence.

a) The effect of rain

Experience has shown that rain in itself, does not usually have an adverse effect upon the stickiness of the material used for treatment. However there is one exception to this rule, and that is when there is an unusually severe and concentrated downfall. This was evidenced to us on the 24th January, 13 days after treatment, when there was a 5 day rainy period with an average 55 mm. downfall. However, an examination of the meteriological records for that period, shows that of this 55 mm. rainfall, 44.5 mm fell during 5 different periods totalling 1½ hours. It was the strength of this concentrated downpour that in all probability watered down the material.

3. PROGRAMME FOR THE 1977/78 CAMPAIGN

It is planned to continue the repellent treatment against birds throughout the year. It will be important to determine the birds' sensitivity to noise in the areas treated by Reta. We plan to examine the combined effects of bird repellent with - for example - gas cannons and distress calls.

Giora Dar,
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