BIRD STRIKE ASSOCIATION OF CANADA
ASSOCIATION CANADIENNE SUR LE PÉRIL AVIAIRE

2011 BIRD STRIKE NORTH AMERICA CONFERENCE

PROUDLY HOSTED BY ACCIPITER RADAR

ACCIPITER TARGETING A SAFER WORLD™

BIRD STRIKE COMMITTEE USA

HOME | PROGRAM | REGISTRATION & ACCOMMODATION | SPONSORS & EXHIBITORS | CALL FOR ABSTRACTS | SOCIAL PROGRAMS | LINKS & PAST INFORMATION

Important Dates

On-line Registration & Accommodation
Closed

Marriott Niagara Falls - Gateway On The Falls

September 12 - 15, 2011

Important Dates

On-line Registration & Accommodation
Closed

Early Registration Deadline
01 June 2011

Regular Registration Deadline
31 August 2011

Late & On-site Registration
On or after 01 September 2011

Call for Abstracts
Closed

Abstract Paper Submission Deadline
01 June 2011

Conference Management

International Conference Services

2011 Bird Strike North America Conference Program, Presentations & Papers

The following presentations and papers have been submitted by presenters from the 2011 Bird Strike North America Conference. Additional presentations will be added to this website once permission has been received from the presenter.
You will require Adobe Acrobat to open the files.

2011 CONFERENCE PROGRAM

Bahat, Ofer
Dr. Ofer Bahat is a Lecturer at Haifa University and the Technion Institute in Haifa, Israel.
Presentation: Tools for Birds' Ecological Carrying Capacity Management at Airports

Beason, Robert
Dr. Robert C. Beason is a Radar Ornithologist with Accipiter Radar Technologies.
Presentation: 3-D Radar Sampling Methods for Ornithology and Wildlife Management

Boyles, Cathy
Ms. Cathy Boyles is a Wildlife Administrator at Dallas Fort Worth International Airport.
Presentation: Using Nighttime Falconry for Roosting Blackbird Abatement at Dallas Fort Worth International Airport

Carter, Nicholas
Dr. Nicholas B. Carter is the Director/Principal at Birdstrike Control Program.
Presentation: ICAO Document 9137 – New and Improved
Presentation: A Decade of Change for the Israeli Air Force

Coleman, Edward
Mr. Ed Coleman is an Air Safety Investigator for the Air Force Safety Center, in the Media and Force Development Division.
Full Paper

Latest developments of ICAO on Wildlife hazard reduction

Yong Wang

Chief, Aerodromes Section, ANB/ICAO

12 September2011

2011 Bird Strike North America Conference

Amendment 10 to Annex 14, Volume I

- 9.4.1 The wildlife strike hazard on, or in the vicinity of, an aerodrome shall be assessed through:

  a) the establishment of a national procedure…

  b) the collection of information from aircraft operators, aerodrome personnel….

  c) an ongoing evaluation of the wildlife hazard by competent personnel.

Amendment 10 to Annex 14, Volume I

- 9.4.3 Action shall be taken to decrease the **risk** to aircraft operations by adopting measures to **minimize the likelihood of collisions between wildlife and aircraft.**

What's New in ASM, Part 3

- Guidance dealing with wildlife other than birds
- Risk assessment of bird/wildlife strikes
- Best practices for bird/wildlife management programmes on airports
- Emerging technology and communications procedures
- …

Other results presented...

- Birdtams must give accurate info about risk – species, numbers, exact place in space – rather than just general info (E. Coleman).
- Research among pilots show that pilots don't pay too much attention to bird strike risk, even though they can effect the outcome. More knowledge, training and procedures are needed (F. Mendonça).
- Bird remains identification of USAF strikes in 2010 show that 11 % are multippel strikes, and that 69 % of these are with 2 birds, the rest with 3 or more (C. Dove).
- Three radar studies showing the performance of the radars were presented (by radar companies; E. Herricks, R. Beason and B. Clark).

Interspecific variation in wildlife hazards to aircraft: Implications for airport wildlife management

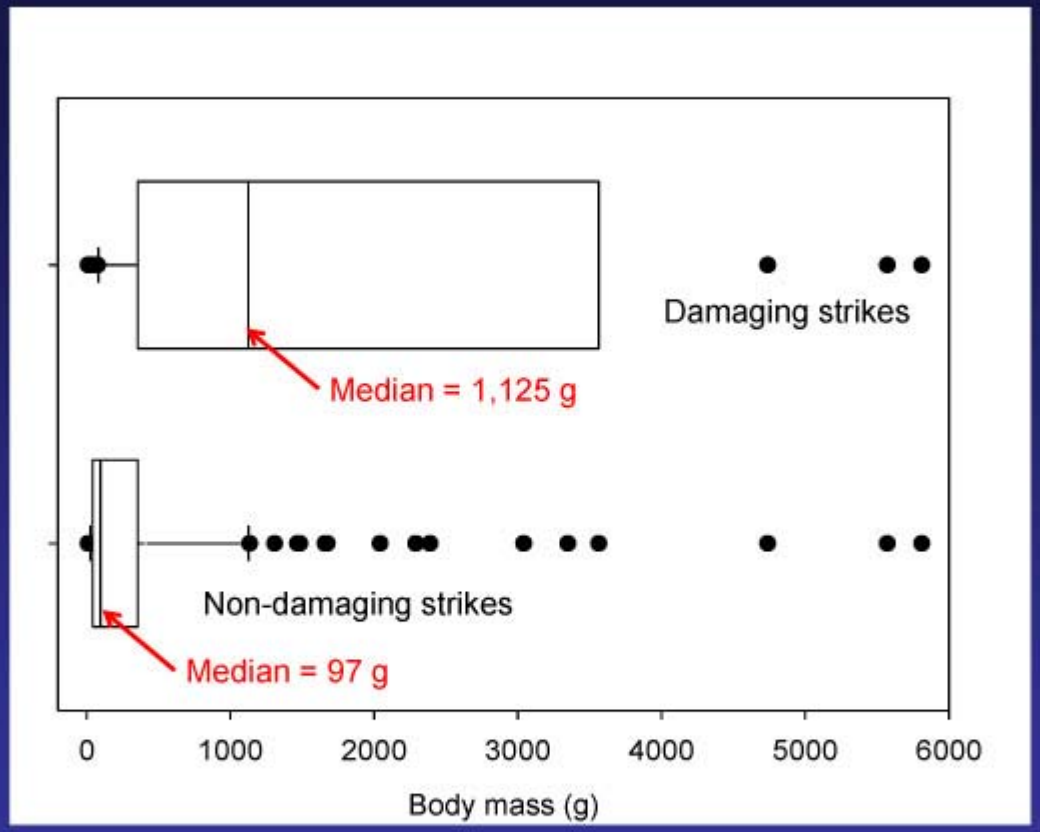
Travis L. DeVault, Jerrold L. Belant,
Bradley F. Blackwell, and Thomas W. Seamans

United States Department of Agriculture
Animal and Plant Health Inspection Service

Wildlife Services
NWRC
National Wildlife Research Center

Top 10 most hazardous birds and mammals

Species	Total strikes reported	% with damage	% with substantial damage	% with EOF	Composite rank	Relative hazard score
Mule deer	47	96	38	83	1	100
White-tailed deer	814	87	36	68	2	88
Domestic dog	21	53	26	75	3	71
Other geese*	20	68	32	32	4	61
Canada goose	776	51	16	34	5	46
Turkey vulture	159	46	16	34	5	44
Other ducks*	77	49	24	30	7	48
Great horned owl	29	52	16	27	8	44
Double-crested cormorant	24	52	13	29	8	43
Brown pelican	31	35	13	38	10	40


Damaging strikes
Median = 1,125 g
Non-damaging strikes
Median = 97 g
0
1000
2000
3000
4000
5000
6000
Body mass (g)

Conclusions—confirmed

- Large mammals are extremely dangerous on airports
  - The top 3 most hazardous species are large mammals
- Overall, large (>1 kg) birds are most dangerous to aircraft
  - Median body mass for species in damaging strikes = **1,125 g**
  - Median body mass for species in non-damaging strikes = **97 g**
- Importance of proper management of stormwater retention ponds and other water bodies
  - 10 of 15 most hazardous birds were associated with water

Why we need to compare wildlife strike data among airports to improve aviation safety

Richard A. Dolbeer, Sandusky, Ohio USA
Michael Begier, Washington, D.C. USA

13th North American Bird Strike Conference,
Niagara Falls, Ontario, Canada

12-16 September 2011

WS Wildlife Services
Protecting People
Protecting Agriculture
Protecting Wildlife

USDA
United States Department of Agriculture
Animal and Plant Health Inspection Service

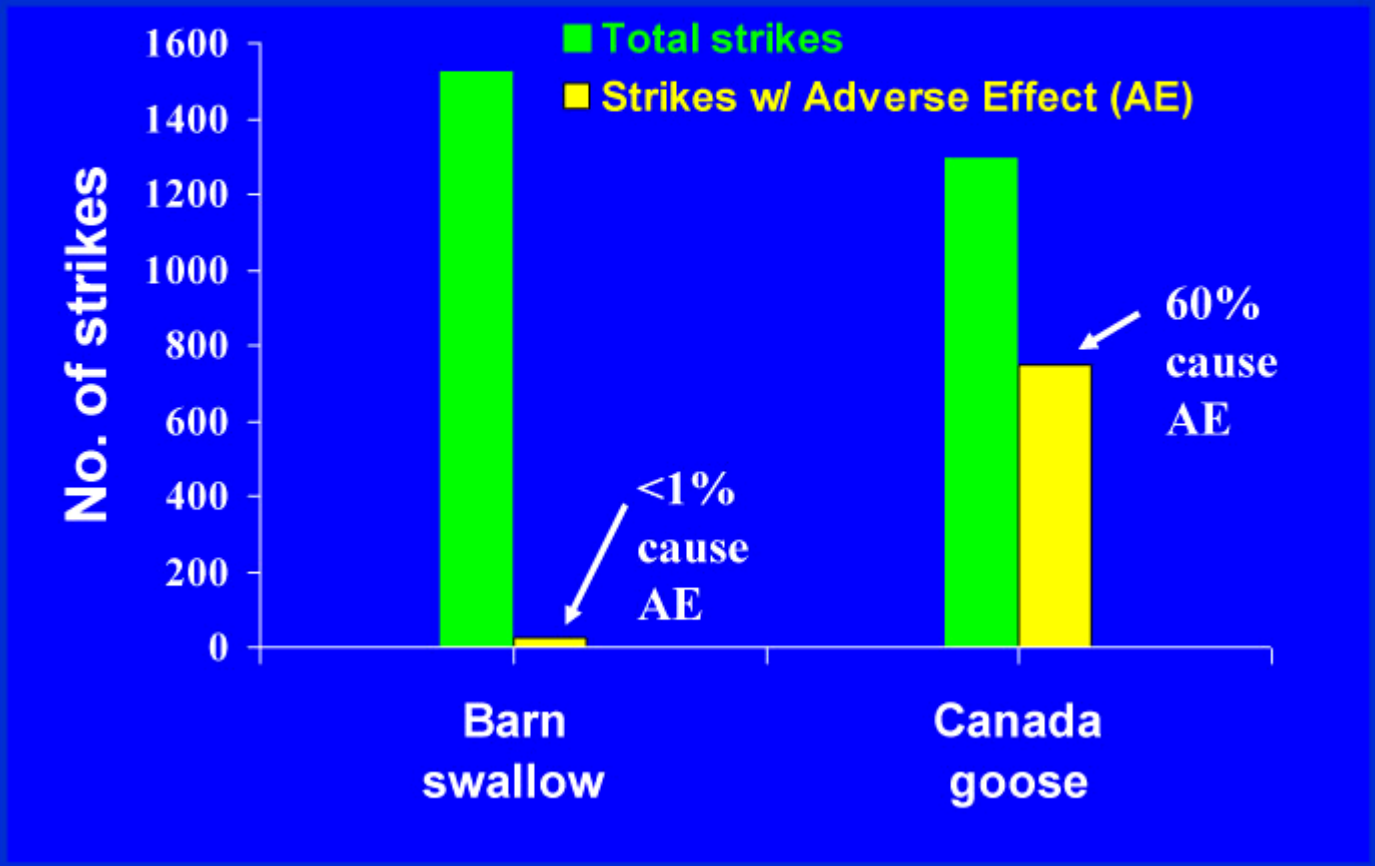
What is an objective benchmark of an airport's performance in mitigating risk?

Should benchmark be the overall strike rate (all reported strikes/100K movements)?

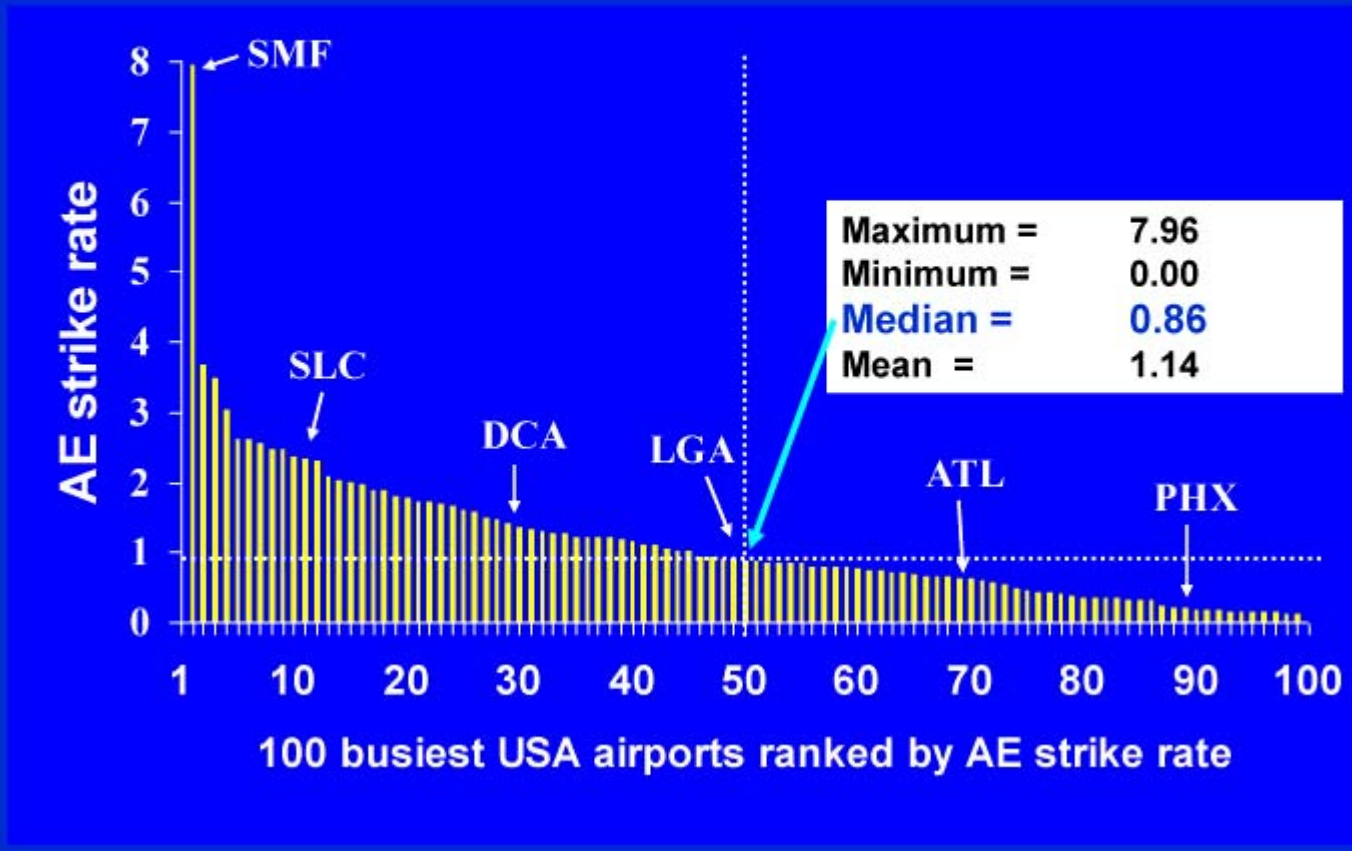
Answer: No. Comparison of the reported strike rate at an airport in relation to rates at other airports is not a valid metric because airports may vary in:

- hazard level of species struck (e.g., swallow vs. goose).
- completeness of reporting all strikes (e.g., carcasses found on runway).

Example: Hazard level of Barn Swallows versus Canada Geese, Civil Aircraft, USA, 1990-2010



Adverse Effect (AE) Wildlife Strikes/100K Movements (≤ 1500 feet AGL), 2006-2010



Royal Netherlands Air Force

BIRD STRIKE PREVENTION

Version 3.x

Arie Dekker, Hans van Gasteren and Inge Both

Royal Netherlands Air Force Command
Mission Support Branche, Nature Bureau

Bird Strike Prevention Version 1.x
"Do something" : active dispersal of birds

Emphasis needs to be shifted!

Not just aimed at
birds at or around
airports

But also at
birds overflying the airport
coming from A, flying to B

Royal Netherlands Air Force

Bird Strike Prevention Version 3.0 = separation based and needs:

- Sensors that timely detect birds flying on collision course
- Techniques that timely discriminate between hazardous and non-hazardous flying birds
- Techniques that distribute the information near real-time to the relevant persons (pilots, Air Traffic Control (ATC), Bird Control Units (BCU))
- Techniques that enable BCU's to make flying birds change their course
- CONOPS that enable pilots to avoid birds (postponing starts!), either via ATC or direct

More results presented...

- Different aircraft strike birds at different rates: Airbus 320 have much more bird strikes than B-737. Birds avoid aircraft, adult birds more so than the young (T. Kelly).
- Data collected on 5 airports in eastern U.S. showed that fewer birds were present when grass was between 31-40 cm, where greater bird numbers were present in <31 cm grass. Waterfowl were most often present in 0-10 cm grass and raptors most often in 11-20 cm grass (J. Watterson).
- Engines are improved according to rules, and further improvements will not give a significant positive effect. Reduced number of strikes is more important (J. Reed).

Specific endophyte-infected grasses for the aviation industry now a reality

FAR

PGG Wrightson Seeds

grasslanz™ unique plant opportunities

agresearch

Auckland International Airport Limited

Christchurch International airport Limited

Hamilton Airport

Bird Strike North American Conference Niagara September 2011

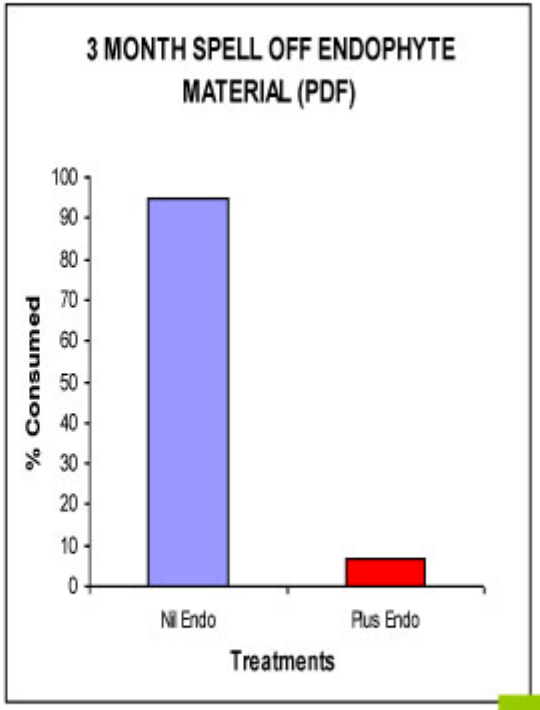
Avoidance Behaviour

grasslanz™
unique plant opportunities

agresearch

Post digestion feedback (PDF)

- Geese returned after 3 month spell
- PDF still working



grasslanz™ unique plant opportunities

agresearch

Why endophyte at airports?

Less insects

Reduced food and insecticide

Ground water

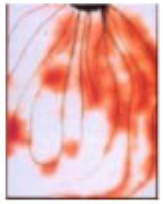


Drought tolerance

No irrigation available

Nutrient uptake

Poor compacted soils

Post digestion malaise

Larger birds



BSC North America

Niagara, September 2011

The Bird Ingestion Hazard to Commercial Aircraft Engines and How It Is Addressed

Les McVey

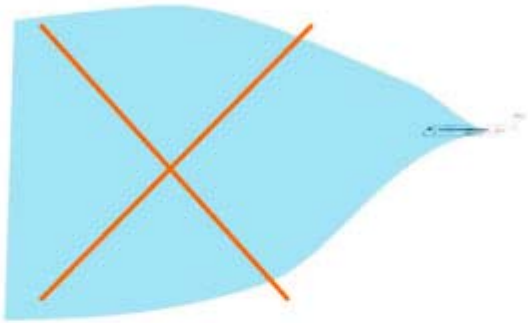
Principal Engineer, Flight Safety Investigator

GE Aviation

Chair, AIA Bird Ingestion Working Group

A MISCONCEPTION

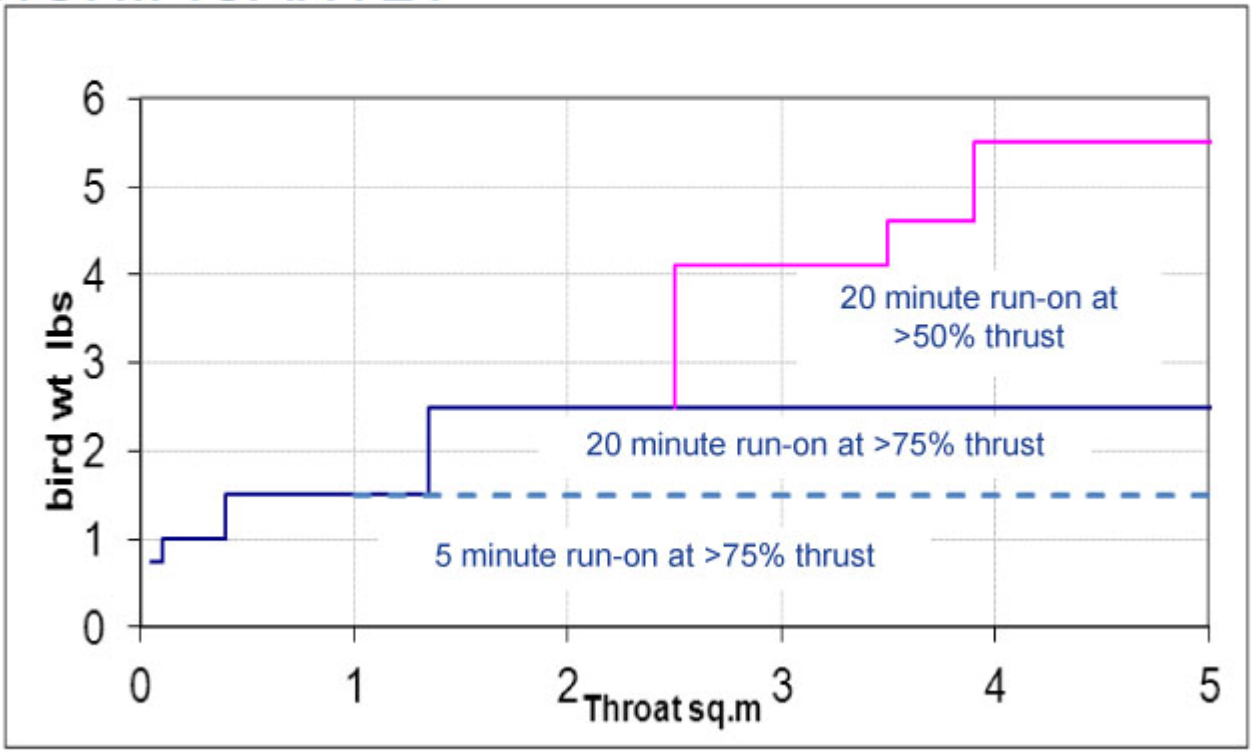
Turbofan engines are huge vacuum cleaners - birds are sucked in from everywhere



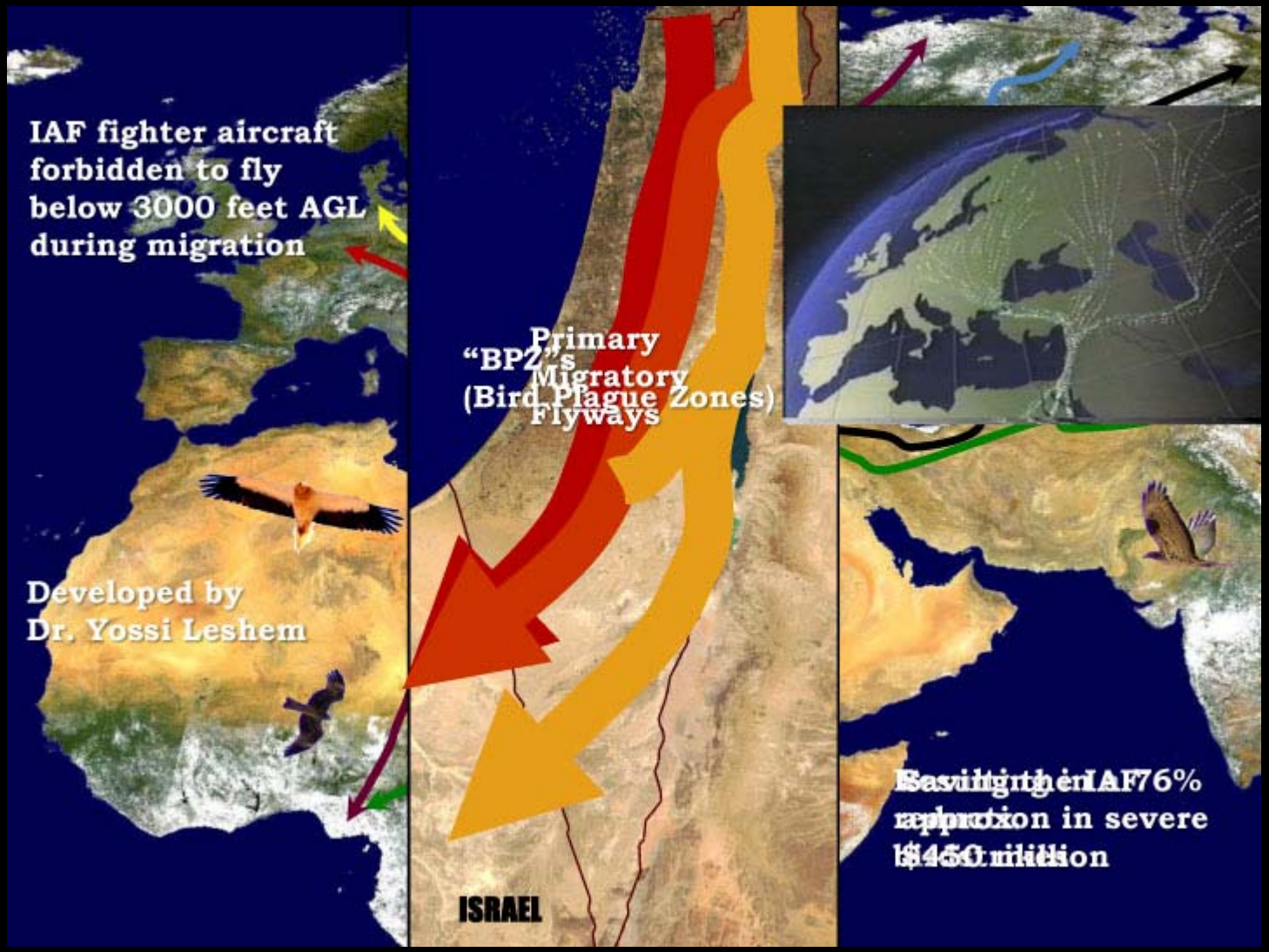
REALITY

They are only ingested if they are in line with engine

THE ENGINE REQUIREMENTS FOR CONTINUED THRUST HAVE INCREASED SIGNIFICANTLY



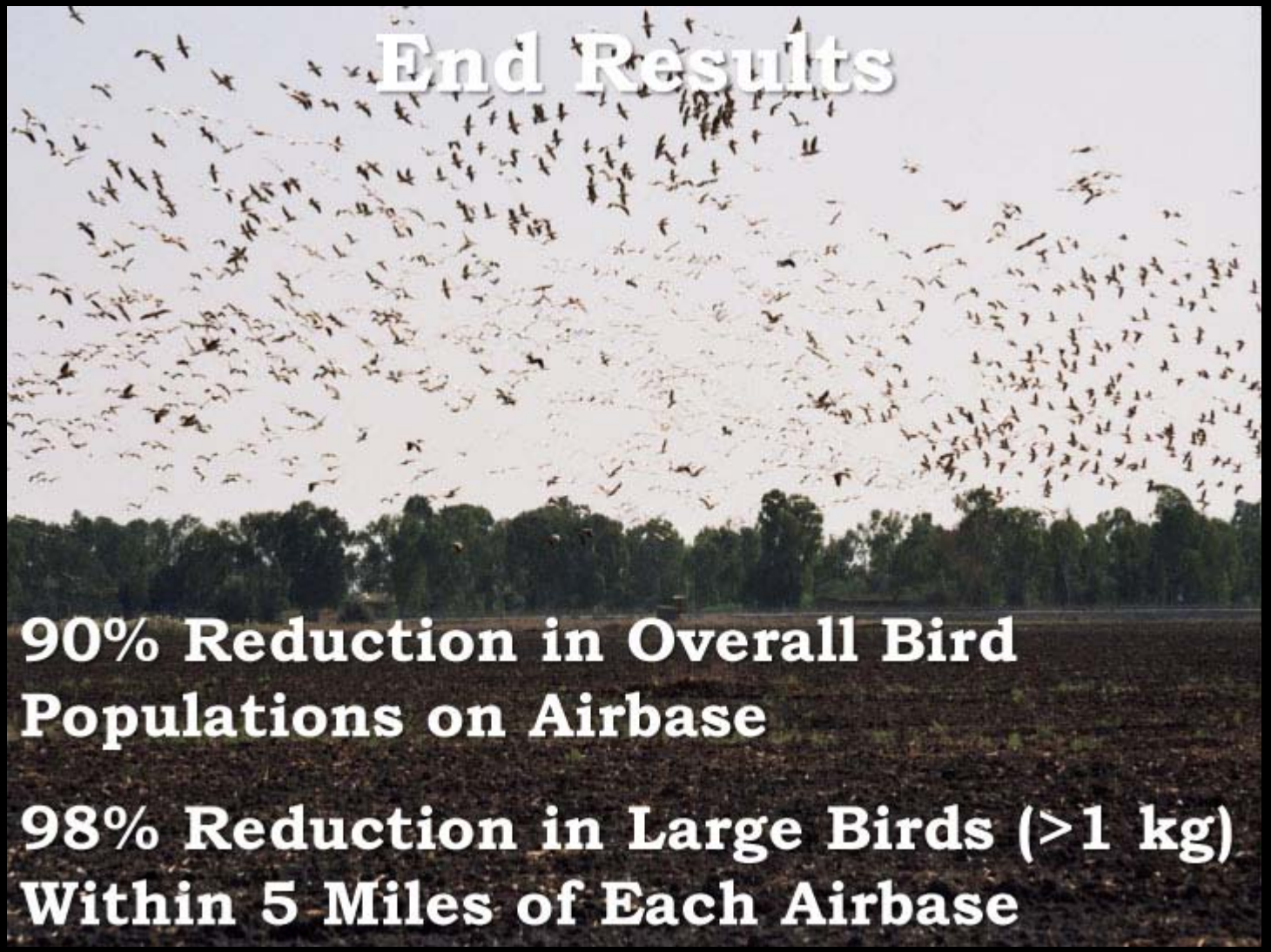

A Decade of Change for the Israeli Air Force
Dr. Nicholas Carter
Birdstrike Control Program
IBSC, CARSAMPAF


IAF fighter aircraft
forbidden to fly
below 3000 feet AGL
during migration
Primary
"BPZ"s
Migratory
(Bird Plague Zones)
Flyways
Developed by
Dr. Yossi Leshem
ISRAEL

Important elements of the bird control program

- Active management program
- Elimination of agriculture
- Removal of debris
- Airfield vegetation management
- Removal of trees
- Elimination of standing water
- Ditch maintenance
- ”Harassment” trapping program
- Clearance of shoulders
- Unique issues (snails on runway)
- Off-base management (border collie)
- On-base education
- Public education
- Comprehensive strike database
- Supplemental radar


End Results
Prior to Initiation of Program =
$10.2 million / year
Since:
$109,000* in Damages over 11 years
(~$9,100 / year)


End Results
90% Reduction in Overall Bird Populations on Airbase
98% Reduction in Large Birds (>1 kg) Within 5 Miles of Each Airbase

Using Nighttime Falconry for Roosting Blackbird Abatement at Dallas/Fort Worth International Airport

Cathy Boyles, Wildlife Administrator
DFW Airport

An Alternate Method

- 2007 contact with a Master Falconer with a proposal to assist

- Before Falconry, December 3, 2007

Terminal B- before abatement. Thousands of blackbirds "stage" on the roof over B23 before heading to the terminal's trees to roost.

Beta Test Results

Terminal B, December 14, 2007. Post abatement.

Pros and Cons of Falconry

- Pros:
  - Effective
  - Lasting Results
  - Economical
  - Natural deterrent
  - Low profile operation
  - Uses contract personnel for seasonal needs
  - Increases interest in airport wildlife issues…

- Cons:
  - Weather dependant
  - Hawks are not tame pets
  - Hawks ineffective during molting
  - Permitting process

The end