Transportation of Canines and Ferrets for Biomedical Research

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Marshall BioResources

• Purpose bred beagles, mongrels, ferrets, Gottingen Minipigs

• Kennel facilities in the United States, UK and China

• Global sales and transportation network
Introduction

Easy, right?

More complex than you might think...for various reasons.
Outline

- Focus mainly on dogs in the interest of time
- Overall goal of transport standards is to promote health, well-being and safety in transit
- IATA and USDA regulations
- Documentation – domestic and export
- Air versus ground
- Crates
- Not like shipping personal pets
- What can go wrong?
- Airline issues
- Animal rights tactics and impact
• Applies to air and ground shipments domestically
• Carriers and intermediate handlers cannot receive animals more than 6 hours prior to departure
• Must have name, address, phone for consignee
• Shipper must sign off on label that food/water was offered within 4 hours of delivery to carrier
• Not less than 45 F or above 85 F for more than 4 consecutive hours
• Acclimation statement signed by vet allows short term deviations
• Container “strong enough to contain the dogs securely and to withstand the normal rigors of transportation”
• Animals can be quickly removed in emergency
• Numerous specific requirements relating to size of openings, no sharp edges, sanitation, ventilation, etc.
• Dogs must be able to “turn about normally while standing, to stand and sit erect, and to lie in a natural position”
• Regulations governing number of animals per kennel according to age, other factors
• Food offered every 24 hours, water every 12
• Observation every 4 hours with ground transport
• Generally the same for ferrets – focus is on providing safe journey for both species
- Applicable to IATA members and airlines
- Broader list of species specific container requirements
- More extensive descriptions of suitable container design, including illustrations
- Somewhat prescriptive

### DENSITY GUIDELINES FOR FERRETS

<table>
<thead>
<tr>
<th>Species</th>
<th>Weight of Animal (grams)</th>
<th>Space per Animal (*** cm²</th>
<th>cm in)</th>
<th>Height of Box cm in</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose-Bred and Domesticated Ferrets†††</td>
<td>Up to 400</td>
<td>253</td>
<td>39</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>401–800</td>
<td>308</td>
<td>48</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>801–1200</td>
<td>386</td>
<td>60</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>1201–2000*††</td>
<td>903</td>
<td>140</td>
<td>15</td>
</tr>
</tbody>
</table>

Notes:
1. A maximum of two adult animals of comparable size up to 14 kg each, that are used to cohabitation, may be shipped in the same container. Animals over that weight must travel individually.
2. Animals up to six months old from the same litter, up to a maximum quantity of three, may be shipped in the same container/compartment.
Documentation

**Domestic:**
- Animal health certificate
- Air waybill (air)
- Bill of lading (ground)
- USDA transfer form

**Export truck (Canada):**
- Bill of lading
- USDA transfer form
- Animal health certificate
- Import permit if dogs under 8 months
- Import permit for feed accompanying animals
- Canadian Customs invoice
- Certificate of Registration
- CBP Form 7533 manifest

**Export air**
- Air waybill
- Shippers certification
- Invoice
- Route plan
- Import permit if needed
- Rabies vaccination certification
- Animal health certificate issued by accredited Vet with USDA endorsement
- Various country specific requirements

**Must be accurate or risk of shipment rejection/return!**
## Air versus Ground

<table>
<thead>
<tr>
<th></th>
<th>Airlines</th>
<th>Ground</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time in transit</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Environmental control</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Animal observation</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Cost</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Capacity</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Public exposure risk</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Possible schedule disruption</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Larger animals (dogs)</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Smaller animals (ferrets)</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
Shipping crates

- Internal food and water receptacles that can be filled from outside
- Receptacles often too small for journey time – may need to replace
- Gel packs for ferrets
- Adequate ventilation per regulations (specific calculations for surface area)
- Durable construction
- Pay attention to fasteners
- Not all crates are created equal
  - Cheaper is not better
  - “pet store crates” are generally unsuitable for transport
Different than shipping pets

- Shipped unaccompanied as cargo
- Typically many animals per shipment
- Attract attention (airline facilities, truck stops)
- Public perception versus pet shipments
- Stigma of companion animals for research
- Cell phone photos
What can go wrong?

Process may appear seamless to recipients but...

- Truck breakdowns
- Traffic delays
- Cancelled flights or missed/wrong connections
- Weather impact
- Health problem arises during transport
- Border crossing technicalities
- Lost documents when exporting
- Etc., etc...

Always maintain emergency response and contingency plans. Truck drivers and airline staff must have 24 hour contact information for the shipper.
Airline issues

- Significant issue facing biomedical researchers, whether they realize it yet or not
- Very few airlines accept laboratory dogs for transport
- Pilot refusals due to noise, odor or personal opinions
- A dog is not a dog…pet animals are fine
- Domestic flights typically limited to just a few crates
- Vast majority of domestic deliveries via truck
- Exports increasingly difficult – charter flights?
Animal rights?

- Activists have identified airlines as a vulnerable link in the animal supply chain
- Various groups dedicated to targeting airlines
- Past success with pressuring carriers to disavow research animal transport
- Revenue from this “cargo” versus public image concerns
- End result is longer time in transit by truck – helping animals?
- Interference with development of new medicines – helping people?
Take home messages

Many complex regulations, but all designed around safety and well-being in transit
Take care with documentation and crate selection
Understand the risks and prepare accordingly
Many potential pitfalls – work with someone who understands best practices
Recognize the overall threat to biomedical research posed by activists and their influence on airlines