



An investigation of Rotavirus infection in Australian pigeons

This survey has been developed to investigate a recent outbreak of Rotavirus in Australian pigeons, including potential transmission routes. Information is needed from both those who have and have not experienced Rotavirus in their loft(s) in order to determine what risk factors are truly associated with infection. The first diagnosis of Rotavirus in Australian pigeons was in December 2016 so you'll notice that many questions focus on the time period from the **1 December 2016** onwards.

Please complete this survey only if you have primary responsibility for the pigeons on your property. As a primary outcome of the survey will be to map the progression of Rotavirus across Australia against the overall population in the state, the true physical address of your loft is important information. However, if you would prefer to maintain a level of confidentiality, the location of the loft(s) to the level of suburb, postcode or the nearest town only will also be very useful.

Please fill out the survey with as much detail as possible. There are no "right" or "wrong" answers. We are just interested in the way you have managed your pigeons over the last 6 months, regardless of whether it is the industry "norm" or accepted practice.

Your participation is much valued and appreciated. Collated results only will be made available to your association/club in order to maintain participant confidentiality.

If you have any questions or comments, please contact the principal researcher:

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Thank you for your time.

Date: _____

Section 1: General information

1.1 What is the name of your pigeon association/club? _____

1.2 What is the physical location(s)/address(es) of the breeding, racing or other lofts that have housed your pigeons **since 1 December 2016**?

If you would prefer that the loft address(es) remain confidential, please provide the suburb, postcode or nearest town as a minimum

Breeding loft address: _____

☐ The racing/other loft is located at the same address as the breeding loft (*Tick if applicable*)

or Racing/other loft address: _____

1.3 Are you the primary person responsible for the care and management of the pigeons at the address(es) listed in Question 1.2?

- ☐ Yes
☐ No – *thank you for your time but please do not complete this survey*

1.4 What is the smallest distance (in metres) between the racing/other loft and breeding loft?
_____ metres

☐ Racing/other loft is located in the same building as the breeding loft (*Tick if applicable*)

1.5 For how many years have you kept pigeons?

NOTE: Please indicate years as whole numbers. If less than one year, please write <1

_____ year(s)

1.6 For how many years have you kept pigeons in the loft located at the address listed in Question 1.2?

_____ year(s)

1.7 How many pigeons in total do you own, including the race team, breeding birds, exhibition birds and youngsters?

_____ birds

1.8 How many pigeons of each age/sex do you house in your **rac**ing/**ex**hibition/**other** loft(s)?

Age of pigeons	Sex of pigeons	Number of pigeons in loft(s)		
		Racing loft	Exhibition loft	Other loft
Youngsters	Hens			
	Cocks			
1 year old	Hens			
	Cocks			
2 year old	Hens			
	Cocks			
>2 year old	Hens			
	Cocks			

If you require more room, please continue on the last page of the survey (Note: indicate the Question number).

1.9 How many pigeons of each age/sex do you house in your **bre**eding loft?

Age of pigeons	Sex of pigeons	Number of pigeons in loft
Youngsters (kept for stock)	Hens	
	Cocks	
1 year old	Hens	
	Cocks	
2-3 years old	Hens	
	Cocks	
4-6 years old	Hens	
	Cocks	
>6 years old	Hens	
	Cocks	

If you require more room, please continue on the last page of the survey (Note: indicate the Question number).

Section 2: General health and management of your pigeons

2.1 Have you vaccinated your pigeons for the following conditions since 1 January 2016?
(Please tick all that apply)

Condition	Vaccine administered in 2016/early 2017? (If Yes = <input checked="" type="checkbox"/>)
Paramyxovirus (PMV)	
Paratyphoid (Salmonella)	
Pigeon poxvirus	
Other: _____	

2.2 How many of your pigeons have you observed with the following clinical signs since 1 December 2016?

Note: If a bird was observed with multiple clinical signs, please choose the main/predominant clinical sign observed and only include each bird once in the table below.

Clinical sign	Number of birds observed
Vomiting/ diarrhea	
Changed or unusual dropping color (e.g. green / red-brown / pale)	
'One-eye cold' / conjunctivitis / discharge from the eye(s)	
Reluctance to move / quiet / fluffed	
Failure to thrive / weight loss	
Nose / nostril discharge	
Breathlessness / shortness of breath / panting	
Accumulation of material in mouth or throat	
Poor loft flying / reluctance to fly	
Joint swelling / lameness	
Sudden death (without other visible clinical signs)	
Loss of balance / head tilt / poor coordination	
Other: _____	
TOTAL number of sick/unwell birds observed since 1 December 2016	

2.3 How often do you clean your racing/other and breeding lofts?

(Please tick one answer only)

<input type="checkbox"/>	Daily
<input type="checkbox"/>	Every 2 days
<input type="checkbox"/>	Twice a week
<input type="checkbox"/>	Once a week
<input type="checkbox"/>	Less than once a week
<input type="checkbox"/>	Other: _____

2.4 Do you routinely clean your racing/other and breeding lofts with a disinfectant (e.g. Virkon)?

<input type="checkbox"/>	No – I scrap the surface to remove droppings only
<input type="checkbox"/>	Yes

If yes, please explain how often you disinfect your lofts and under what circumstances (e.g. I disinfect part of the loft when a bird dies suddenly)

2.5 Since 1 December 2016, how often do you treat your pigeons and what treatment(s), other than vaccination (if available), do you use?

Note: treatment(s) could be either routine/preventative and/or in response to a suspected/diagnosed disease incident

Treatment	Treatment frequency (i.e. How often?)	Reason for treatment
e.g. Spartrix™	1 tablet daily to adult birds	Preventative against Canker

If you require more room, please continue on the last page of the survey (Note: indicate the Question number).

2.6 What is the average number of **youngsters** or young birds (i.e. <1 year old) currently housed within each 2 cubic-metre section of your racing/other loft?

(Please tick one answer only)

- ☐ <10 birds
- ☐ 10-15 birds
- ☐ 15-20 birds
- ☐ 20-25 birds
- ☐ 25-30 birds
- ☐ 20-35 birds
- ☐ 35-40 birds
- ☐ >40 birds

2.7 What is the source(s) of water to your pigeons?

2.8 Do you filter the water before it is provided to your pigeons?

- ☐ No
- ☐ Yes (Filtration type: _____)

2.9 Please describe the break-down of ingredients of the feed provided to your pigeons in 2016/2017, depending on the bird age-class.

Ingredient	Percentage of feed consisting of each ingredient (% used)			
	Racing/Other loft		Breeding loft	
	Adult birds	Growing/moulting youngsters	Breeding hens and cocks	Non-breeding birds
Wheat				
Peas				
Corn				
Sorghum				
Safflower Seed				
Small seeds (e.g. rice)				
Pigeon pellets				
Other:				

If you require more room, please continue on the last page of the survey (Note: indicate the Question number).

2.10 Please describe any supplements, including grit and mineral blocks, that you have fed to your pigeons in 2016/2017 (e.g. Nutrivet™).

☐ No supplements were given to my pigeons in 2016/2017

2.11 What is the total number of your pigeons, including those that did not return from a race/toss/exercise, that have died or been lost **since 1 December 2016**?

_____ birds

Section 3: Clinical signs typical of Rotavirus in pigeons

3.1 Based on your answer to Question 2.2, have you observed any pigeons specifically with a reluctance to move, have been fluffed and/or quiet, vomiting, diarrhoea and/or that have suddenly died **since 1 December 2016** (even if you believe it was not due to infection with Rotavirus)?

(Please tick one option only)

☐ No – Please go to Section 4
☐ Yes

3.2 Was Rotavirus diagnosed by a veterinarian as the cause of these clinical signs?

(Please tick one option only)

☐ Yes
☐ No *(Please go to Section 4)*

If yes, please provide the name of the clinic and veterinarian:

With your permission, we would like to access the records that specifically relate to the diagnosis of Rotavirus in your pigeons to evaluate the diagnostic test that was used. If you give permission to allow researcher access to those records, please sign and date below and a request will be sent to your veterinarian. All records will be kept confidential.

I give permission for Dr Jaimie Hunnam (Principal Veterinary Officer – Epidemiology) to access records relating to diagnoses of Rotavirus in pigeons owned by me by the veterinarian/at the veterinary clinic listed above.

Name: _____

Signature: _____

Address: _____

Today's date: _____

3.3 Please describe, on a daily basis, the details of any birds observed with a reluctance to move, have been fluffed and/or quiet, vomiting, diarrhoea and/or that have died suddenly in your breeding or racing/other loft since 1 December 2016.

Date	Loft (Racing/Breeding/Other)	Number sick (new cases)	Clinical signs observed	Number of each affected age/sex
e.g. 06/01/2017	Racing	2	Vomiting; green diarrhea	1 x 2 year old hen; 1 x 2 year old cock

If you require more room, please continue on the last page of the survey (Note: indicate the Question number).

3.4 In total, how many birds that were observed with diarrhea, a reluctance to move, being fluffed, quiet and/or vomiting since 1 December 2016, did **not** die?

_____ (If all birds recovered, please go to Section 4)

3.5 On average, what was the length of time (in hours or days) between when you first observed a bird with these clinical signs and when that bird died?

_____ hours **or** _____ days

(please complete one only)

Section 4. Birds OTHER than pigeons kept by you and/or in the vicinity of your loft(s)

NOTE: This section refers to any bird species, other than your pigeons, including chickens, turkeys, meat pigeons and/or feral or native birds.

4.1 Are there any other bird species kept by you, including chickens and, if present, what is the average distance (in metres) from the lofts to these birds?

☐ I do not keep any other bird species other than the pigeons (Please go to Question 4.3)

Species	Number of birds	Average distance from the lofts (metres)
e.g. Budgies	6	One metre. Housed directly adjacent to pigeon loft.

If you require more room, please continue on the last page of the survey (Note: indicate the Question number).

4.2 How many other birds kept by you (i.e. other than your pigeons) have you observed with depression, vomiting, diarrhoea and/or have died since 1 December 2016 (even if you believe it was not due to infection with Rotavirus)?

☐ There have been no other birds observed with those clinical signs since 1 December 2016

Date signs first observed	Species	Number of birds	Clinical sign(s) observed	Died?
e.g. 05/01/2017	Budgie	1	Diarrhoea	No

If you require more room, please continue on the last page of the survey (Note: indicate the Question number).

4.3 Can your pigeons access any areas that have been defecated on by any other birds, including feral or native birds (e.g. on a landing board, fly-in or flight/aviary)?
(Please tick one option only)

☐ Yes
☐ No

4.4 How often do feral or native birds (e.g. feral pigeons, sparrows) enter your lofts?

(Please tick one option only)

<input type="checkbox"/>	Wild birds constantly present
<input type="checkbox"/>	>2 times a week
<input type="checkbox"/>	Once a week
<input type="checkbox"/>	Once every fortnight
<input type="checkbox"/>	Once a month
<input type="checkbox"/>	Once every 6 months
<input type="checkbox"/>	Never
<input type="checkbox"/>	Other: _____

Section 5: Movements INTO your loft

5.1 Describe any recent deliberate movement of live pigeons **INTO** your loft(s) **since 1 December 2016**, including the source location(s) of those birds (to the level of suburb or nearest town).

Date	Number of birds	Age/sex	Source location(s)
e.g. 10/02/2017	3	3 x <1 year old hens	Ballarat

If you require more room, please continue on the last page of the survey (Note: indicate the Question number).

5.2 Describe the movement of any product or material INTO your loft(s) since 1 December 2016, including feed, equipment or shared vaccines.

Date	Product/material	Type of contact with pigeons
e.g. 10/02/2017	Feed	Fed twice daily to pigeons

If you require more room, please continue on the last page of the survey (Note: indicate the Question number).

5.3 Describe access by any person other than yourself to the loft(s), for any reason and regardless of whether birds were handled, since 1 December 2016.

Date	Description of Person	Type of contact with pigeons (if any)
e.g. 10/02/2017	Local fancier	Picked up ~5 pigeons and examined

If you require more room, please continue on the last page of the survey (Note: indicate the Question number).

5.4 Do you wear freshly laundered, clean clothes whenever you enter your loft(s)?
(Please tick one option only)

- ☐ No – I have generally worn the clothes elsewhere first, including other lofts
- ☐ Sometimes
- ☐ Yes – I only wear freshly laundered, clean clothes when I enter my loft
- ☐ Other: _____

Section 6: Contact with other pigeon lofts/fanciers

6.1 Describe the details of any neighbouring lofts that house pigeons within 1 kilometre (in any direction) of your loft(s).

☐ There are no other lofts within 1 kilometre of my loft (*Please tick if applicable*)

Loft #	Distance (in kilometres) from your loft(s)	Approximate number of pigeons housed in neighbouring loft
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

If you require more room, please continue on the last page of the survey (Note: indicate the Question number).

6.2 What is the estimated number of lofts that house pigeons within 5 kilometres (in any direction) of your loft(s), including those listed above?

_____ lofts

6.3 Describe **any** contacts **you** have had with other pigeons, lofts and/or pigeon fanciers **since 1 December 2016**, including meetings, sales, individual lofts or races.

Date	Type of contact (and whether live birds were handled)
e.g. 12/02/2017	visit to local fancier. Handled around 10 birds. Association meeting with local fanciers. No birds handled.

If you require more room, please continue on the last page of the survey (Note: indicate the Question number).

6.4 Did you **attend** any interstate club meetings/sales since 1 December 2016?

(Please tick one option only)

- ☐ No *(Please go to Question 6.7)*
☐ Yes, please specify where and when

6.5 Did you **handle** any live birds at any interstate club meetings/sales since 1 December 2016?

(Please tick one option only)

- ☐ No
☐ Yes, please specify

6.6 Did you **purchase** any live birds from interstate club meetings/sales since 1 December 2016?

(Please tick one option only)

- ☐ No
☐ Yes

6.7 Describe the details of **any** contact you have had with any interstate (i.e. sourced from outside your state) fanciers or pigeons since 1 January 2016, including your attendance at any interstate races, lofts, sales or meetings.

Date(s)	State of interest	Type of contact
e.g. 20/11/2016 - 22/11/2016	WA	2 WA pigeon fanciers visited (friends). Handled a few pigeons at my loft.

If you require more room, please continue on the last page of the survey (Note: indicate the Question number).

Please describe any details which have been important in your personal experience of the recent outbreak of Rotavirus in pigeons:

Thank you. Your participation is much appreciated.