

# Tetanus Infections in working equines in Egypt

July-September 2017 (Q2 FY 2017-2018)

*Notes for analysis of Tetanus research study:-*

## Regions& Addresses

- Cairo received the highest number of tetanus cases 19 cases out of 34 (56%),No cases treated from tetanus at Luxor or Aswan regions in this quarter.
- Inside Cairo region mainly the cases distributed eventually from all the addresses (table:2)

Region	Number of animals	%
Cairo	19	56%
Alex.	3	9%
Edfu	2	6%
Matrouh	4	12%
Mansoura	6	17%
Total	34	100 %

Table 1.No of equines treated from tetanus per region during July-Sept. 2018.

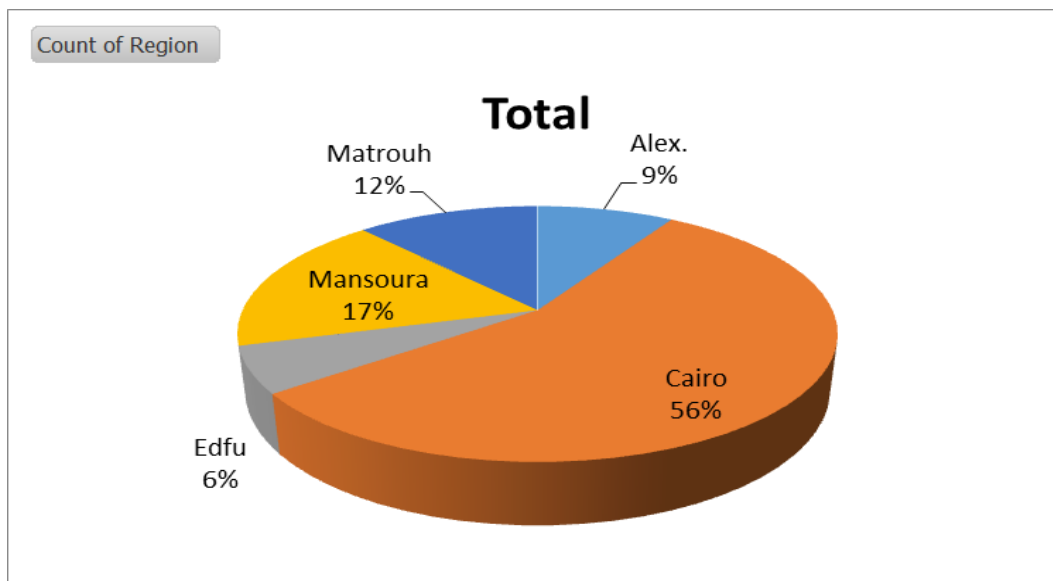


Chart 1: No of equines treated from tetanus per region during July-Sept. 2018.

		Cairo 19 cases													
No	Address														
1	Al Madabekh														
2	Belquis Kaluob														
1	Bolak Eldakror														
1	Dar El Salam														
1	El Agoza														
1	El Brageal														
2	El Khosos														
1	Ezbt El Asabgy - Giza														
1	Giza														
1	Mostorod														
1	NB														
2	Saft El Labn														
1	Sayda Zeinb														
1	Shubra														
2	Zaraeb El Mokatam														

Table, 2 Cairo cases distributed to the addresses where equines come from.

### Species, Sex, Age and Body condition:-

- Out of 34(100%) equine cases 21(62%) from horses, 12 (35%) from Donkeys, 1(3%) mule (Table 3).
- Out of 34(100%) equine cases 27(79%) from males, 7(21%) from females (Table 4.).
- Age group 6-15y represented by 50% of total cases (17 cases out of 34), then the age group 1-5 y take 38% from the total cases(13 cases out of 34).
- From the Table 6. We found the best body condition group (medium in compare with thin) take the largest no of cases infected with tetanus 20 out of 34 by 58% while thin score 8 cases out 34 cases by 24%

Species	Number of animals	%
Horse	21	62%
Donkey	12	35%
Mule	1	3%
Total	34	100 %

Table 3.No & % of each equine species treated from tetanus.

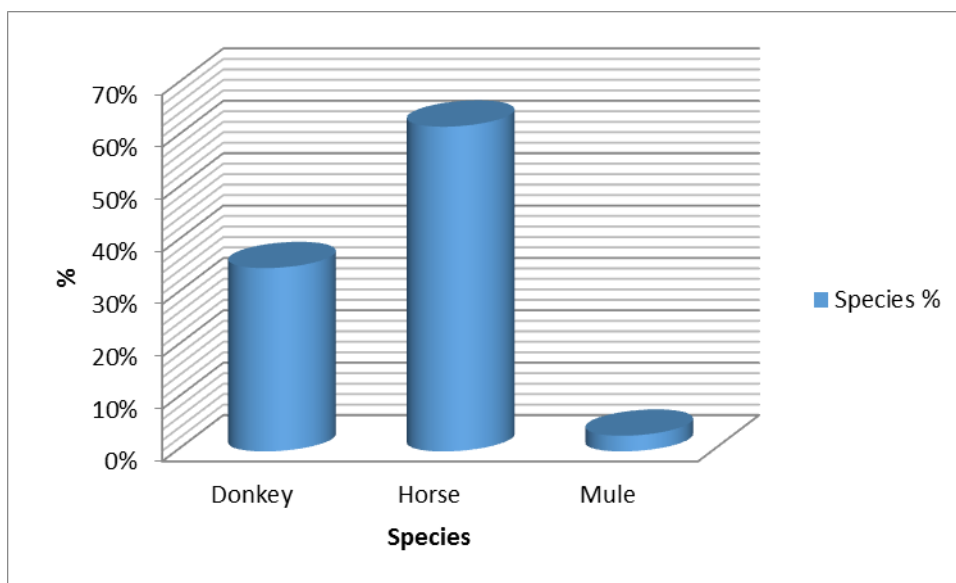


Chart 2: % of equine species treated from tetanus.

Sex	Number of animals	%
Male	27	79%
Female	7	21%
Total	34	100 %

Table 4.No & %of each sex equine species treated from tetanus.

Age	Number of animals	%
less than 1 y	1	3%
1-5 y	13	38%
6-15 y	17	50%
Over 16y	3	9%
Total	34	100 %

Table 5.No & %of each equine age group treated from tetanus.

Body Condition	Number of animals	%
Medium	20	58%
Thin	8	24%
NA	6	18%
Total	34	100 %

Table 6.No & %of each equine body condition group treated from tetanus.

### History of vaccinations against tetanus or the animal wounded:-

- 97% of the total cases with history of no vaccination against tetanus (Table 7).
- 74% (25 cases out of 34 )with history of wound for any reasons at last month before tetanus signs appear, area of wound on animal body take the highest number 9 out of 25, area of hooves 7 out of 25, Extremities 5 out of 25 then came the poll are in the last class with one case out of 25.

Do you vaccinate your donkey against tetanus?	Number of animals	%
Yes	1	3%
No	33	97%
Total	34	100 %

Table 7.history of vaccination against tetanus

Did your animal wounded for any reasons last month?	Number of animals	%	Wound Area on the animal	
Yes	25	74%	Body	9
			Extremities	5
			H&N except poll area	3
			Hooves	7
			Poll area	1

No	9	26%	
Total	34	100 %	

Table 8.No & %of equines wounded or not and which area of animal is wounded.

**End Result:-**

- 41 % of cases are cured, 35% of cases are died and 9% of cases are euthanized (Table 9.).
- For each region : Cairo 37% cured(7 out of 19), 53% died and 10% euthanized, Alex 100% cured(3 out of 3), Edfu 50% died(one out of two) and the other 50% is euthanized, Matrouh 50% cured (2 out of 4) and Mansoura 33% cured (2out of 6)( Table 10.).
- The % of cured at horse species (48%) is better when we compare with the donkey species (25%) (Table 12.).
- The % of end result cured is high (50%) at thin body condition score in compare with 40% at medium body condition score (Table 13).

End Result	No	% of each end result
Cured	14	41%
Died	12	35%
Euthanized	3	9%
NA	5	15%
<b>Total</b>	<b>34</b>	<b>100%</b>

Table 9.No & %of equines end result.

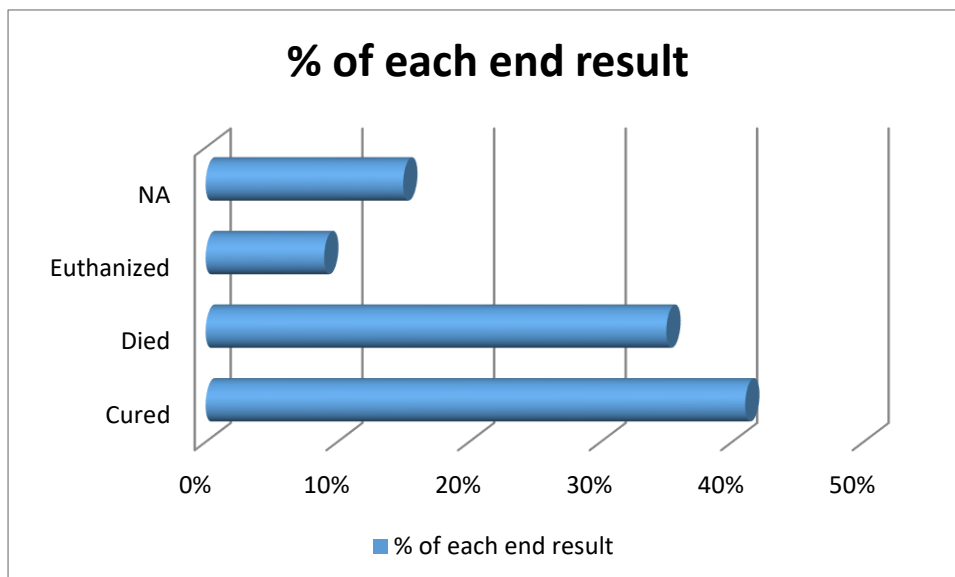


Chart 3: % of equines end result.

Cairo			Alex.	Edfu		Matrouh			Mansoura	
19 (100%)			3(100%)	2(100%)		4(100%)			6(100%)	
Cured	Died	Euthanized	Cured	Died	Euthanized	Cured	Died	NA	Cured	NA
7	10	2	3	1	1	2	1	1	2	4
37%	53%	10%	100%	50%	50%	50%	25%	25%	33%	66%

Table 10.No & %of end result for each region.

Cairo						Alex.		Edfu		Matrouh				Mansoura		
19 (56%)						3(9%)		2(6%)		4(12%)				6(17%)		
Horse			Donkey			Horse	Mule	Horse	Donkey	Horse	Donkey			Horse	Donkey	
16			3			2	1	1	1	1	3			1	5	
Cured	Died	Euthanized	Cured	Died	Euthanized	Cured	Cured	Died	Euthanized	Cured	Cured	Died	NA	Cured	Cured	NA
6	9	1	1	1	1	2	1	1	1	1	1	1	1	1	1	4

Table11.No of each equine species with the end result treated from tetanus per region.

Horse			Donkey				Mule
21 (100%)			12(100%)				1(100%)
Cured	Died	Euthanized	Cured	Died	Euthanized	NA	Cured
10	10	1	3	2	2	5	1
48%	48%	4%	25%	17%	17%	41%	100%

Table 12.No & %of each equine species end result treated from tetanus.

Body Conditions	No of Animals	End Result	No of Animals for each End result	Percentage
<b>Medium</b>	<b>20(100%)</b>	Cured	8	40%
		Died	8	40%
		Euthanized	1	5%
		NA	3	15%
<b>Thin</b>	<b>8(100%)</b>	Cured	4	50%
		Died	2	25%
		Euthanized	1	12.5%
		NA	1	12.5%
<b>Blank</b>	<b>6(100%)</b>	Cured	2	33.3%
		Died	2	33.3%
		Euthanized	1	16.6%
		NA	1	16.6%
<b>Total</b>	<b>34</b>		<b>34</b>	

**Table 13.No & %of each end result for each body condition group treated from tetanus.**

**End Result with signs:-**

- **86% (12 out of 14) of cured cases with no sign of lockjaw when it seen at first time.**
- **100 % ( 14 out of 14) of cured cases with no sign of Recumbency, muscular spasm when it seen at first time.**
- **Two out of three cases of euthanized cases with sign of Recumbency, muscular spasm when it seen at first time.**
- **Three out of twelve from died cases with sign of Recumbency, muscular spasm when it seen at first time.**

Sign		1 <sup>st</sup> Week	2 <sup>nd</sup> Week	3 <sup>rd</sup> Week	4 <sup>th</sup> Week
Wound	Present	20	4	2	0
	Healed	0	2	3	3
	Absent	14	0	0	0
	NA	0	28	29	31
Stiffness in the head and limbs	Present	30	9	5	3
	Absent	4	5	8	6
	NA	0	20	21	25
Erect stiff ear	Present	32	13	8	3
	Absent	2	1	5	6
	NA	0	20	21	25
Flared nostrils	Present	29	10	5	2
	Absent	5	4	8	7
	NA	0	20	21	25
Difficulty in chewing	Present	22	7	3	1
	Absent	12	7	10	8
	NA	0	20	21	25
lockjaw	Present	8	1	0	1
	Absent	26	13	13	8
	NA	0	20	21	25
Violent body spasms in response to sudden movements or noise	Present	23	7	3	1
	Absent	11	7	10	8
	NA	0	20	21	25
Extension or elevation of the tail	Present	21	5	4	1
	Absent	13	9	9	8
	NA	0	20	21	25
Protrusion of the third eyelid.	Present	32	11	9	3
	Absent	2	3	4	6
	NA	0	20	21	25
Recumbency, muscular spasm	Present	6	1	1	1
	Absent	28	13	12	8
	NA	0	20	21	25

Table 14.No of equines suffered from each signs treated from tetanus.