



MINISTERIO
DE MEDIO AMBIENTE
Y MEDIO RURAL Y MARINO

INFORMATION FROM SPAIN ON 2010 WEST NILE FEVER OUTBREAK (LINAGE 1)

**S.G. Sanidad de la
Producción Primaria**



SCoFCAH 11-12th October 2010



WNF SURVEILLANCE PROGRAM

	Passive Surveillance	Active Surveillance	Note	Intervention Zone
Wild birds	Abnormal mortalities Sampling	Risk based sampling	Objective: 1.Seroconversion and viral circulation detection. 2. Virus identification Recovery centers Zoological parks nearby Killed game animals	a) Wetlands: <input type="checkbox"/> Doñana <input type="checkbox"/> Delta del Ebro <input type="checkbox"/> North of Catalonia <input type="checkbox"/> Mediterranean wetlands: Valencia, Murcia Balearic Islands.
Mosquitoes		Traps positioning Virus research Population dynamic research	Objective: 1.Mosquitoes population dynamics 2.Fortnightly sampling	b) Wetlands nearby equine holdings.
Horses	Clinical symptomatology. Sentinels	Sampling in risk areas in case of epidemic wave		

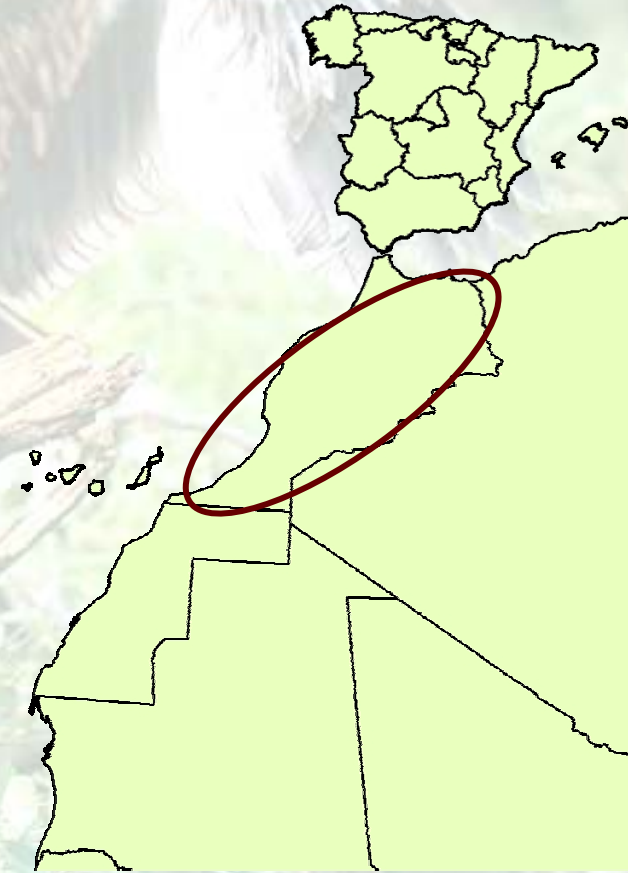


MINISTERIO
DE MEDIO AMBIENTE
Y MEDIO RURAL Y MARINO

In recent years WNV antibodies have been detected in migratory birds in center and south Spain.

The virus was isolated in 4 eagles and 1 stork (migratory birds).

16 outbreaks in Morocco since
august 2010





WNV OUTBREAK IN SPAIN 10.09.2010

- Primary outbreak:
 - Jerez de la Frontera, Campiña. CÁDIZ.



- Secondary outbreaks:

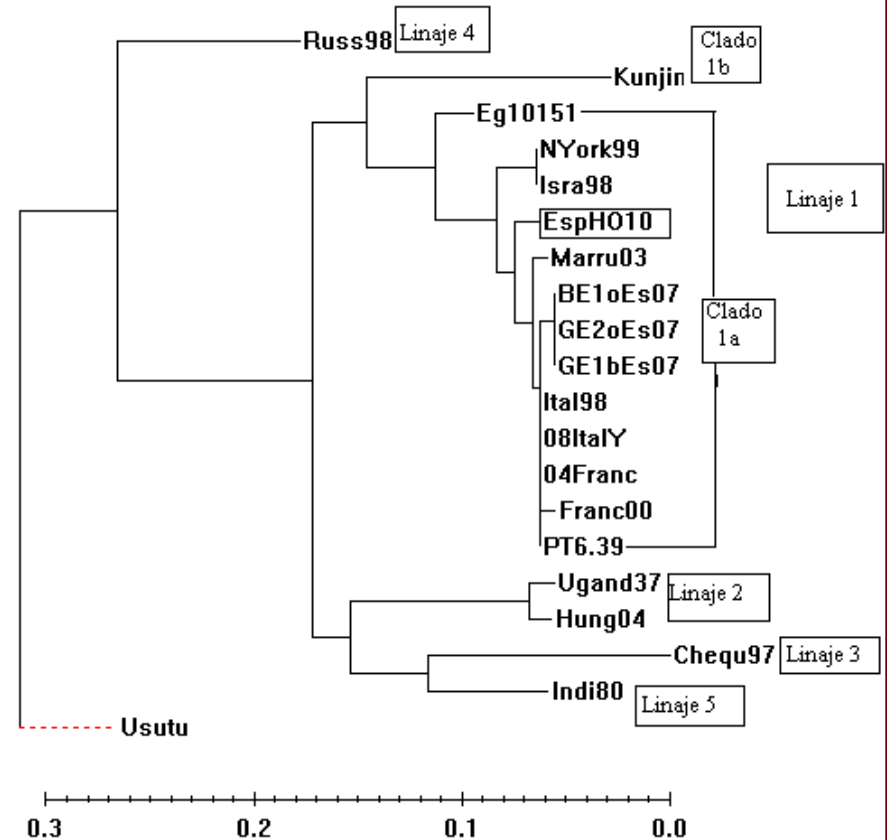
- CÁDIZ: 15 outbreaks. 2 human cases in Cádiz
- SEVILLA: 1 outbreak. ELISA IgM; RT-PCR

SUSCEPTIBLE ANIMALS	AFFECTED ANIMALS	DEAD ANIMALS
186	21	4



WNV PHYLOGENETIC TREE

Spain 2010 Linage 1



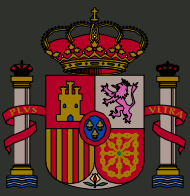
Dendrogram obtained by neighbor-joining

Date: 07/10/2010 time: 10:39:01

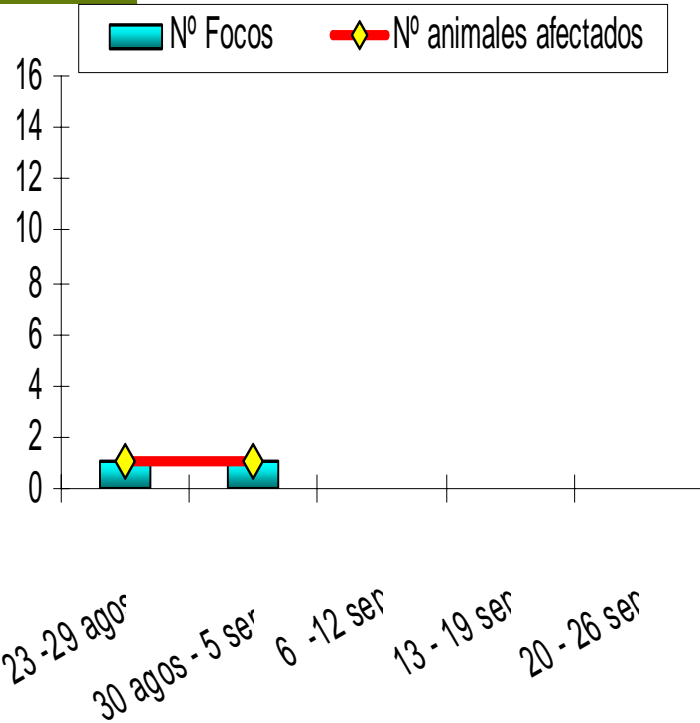
Nucleotide distance : Kimura 2 parameters (Susbt. per site)

Indeterminations : Remove all undefined sites

Deletions : Remove all sites with deletions

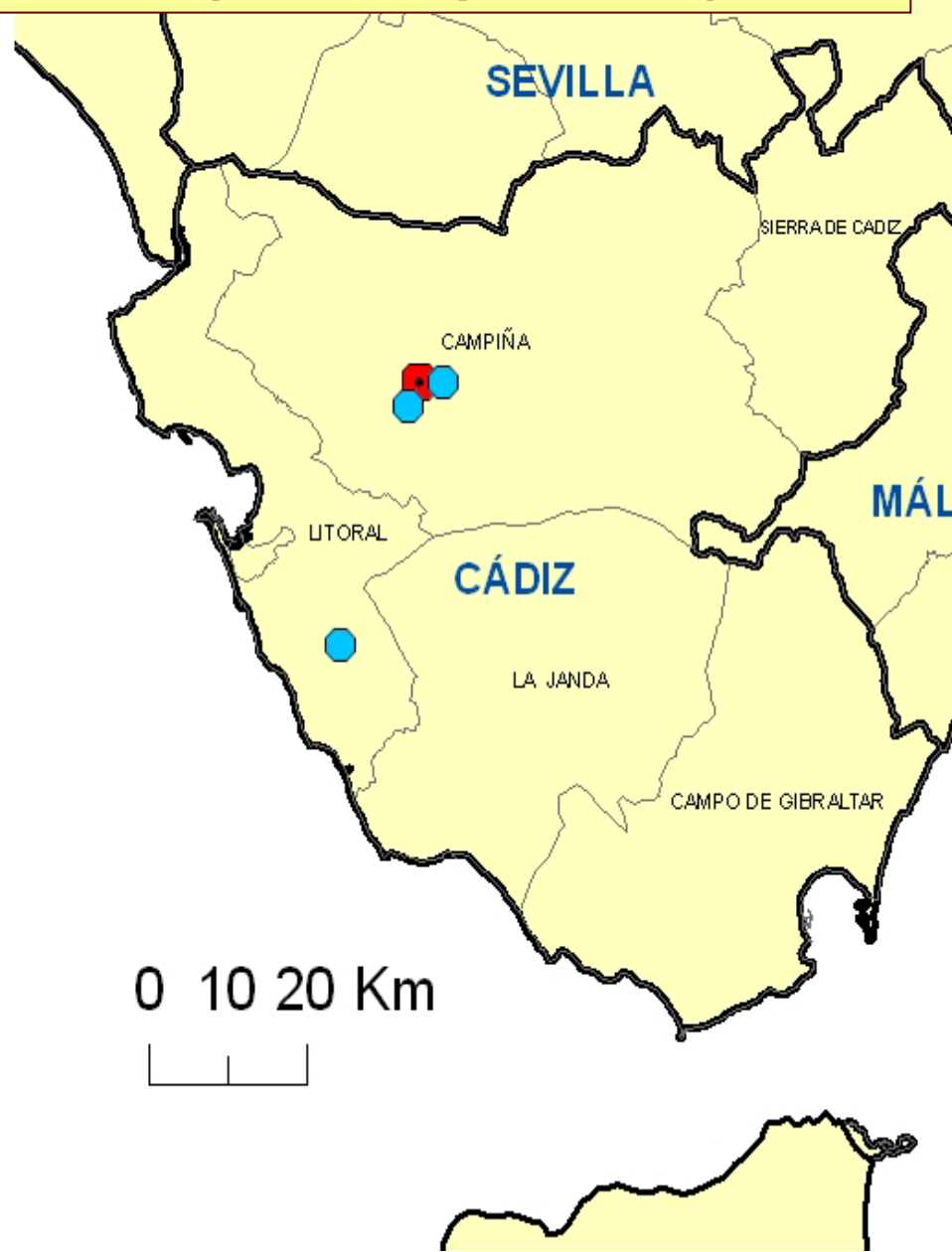
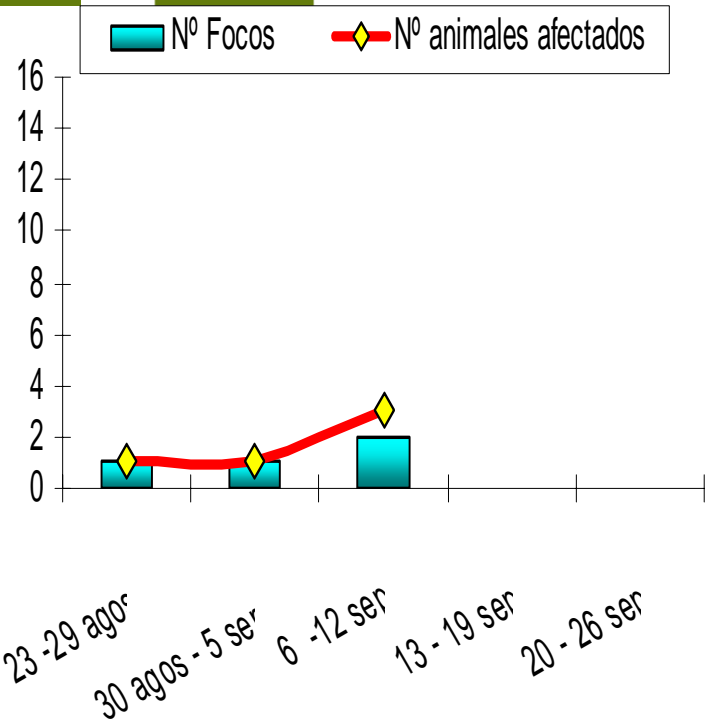


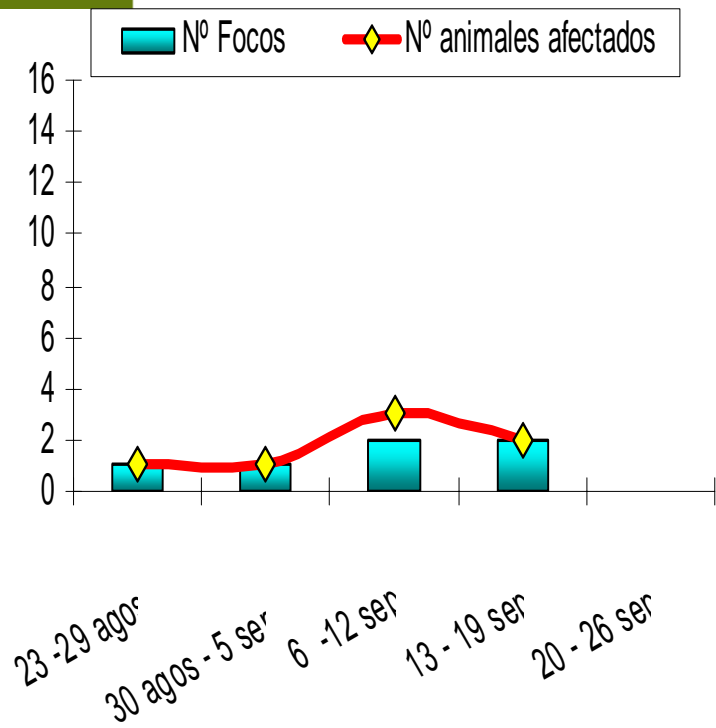
2nd week (30 August- 6 September)





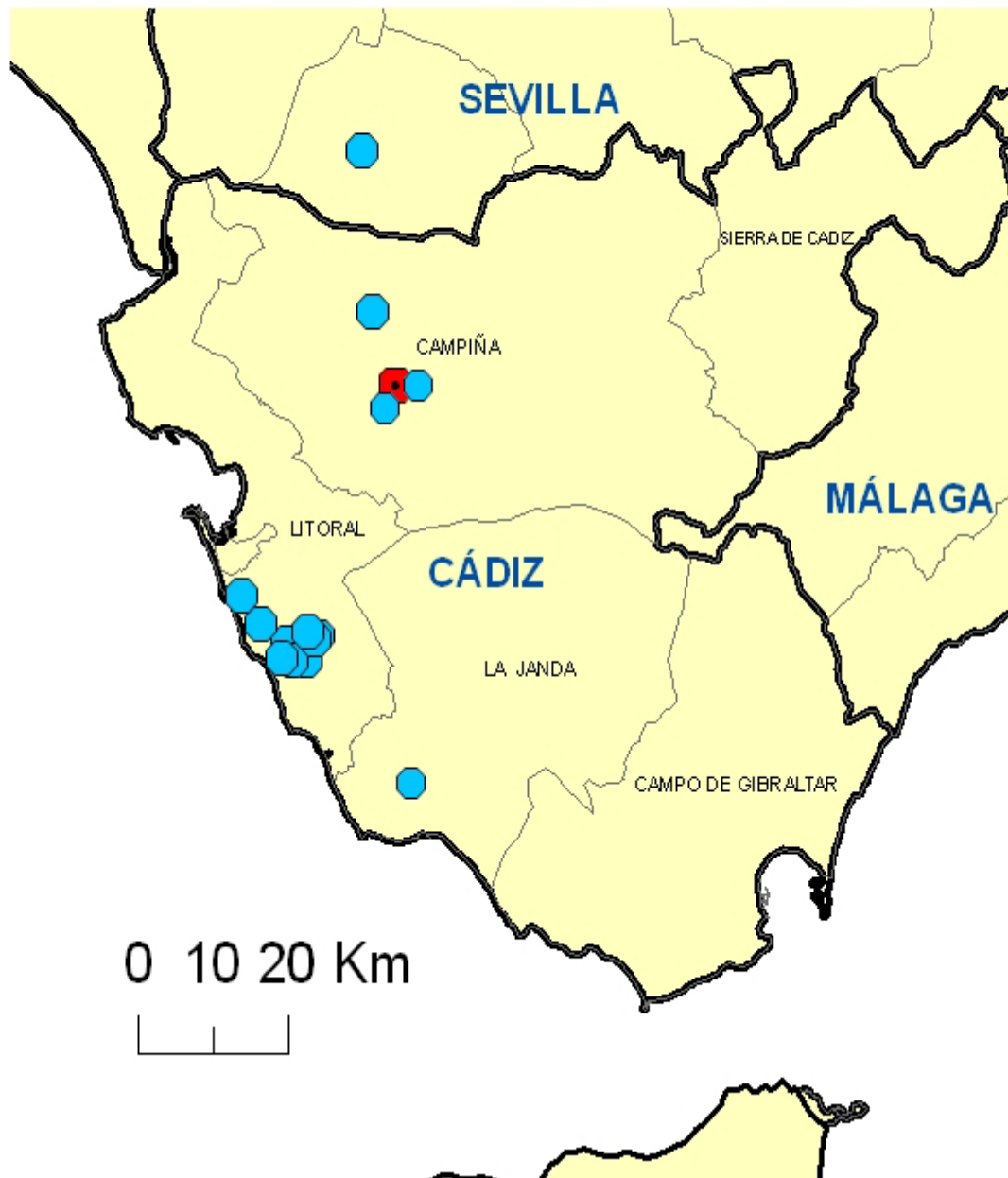
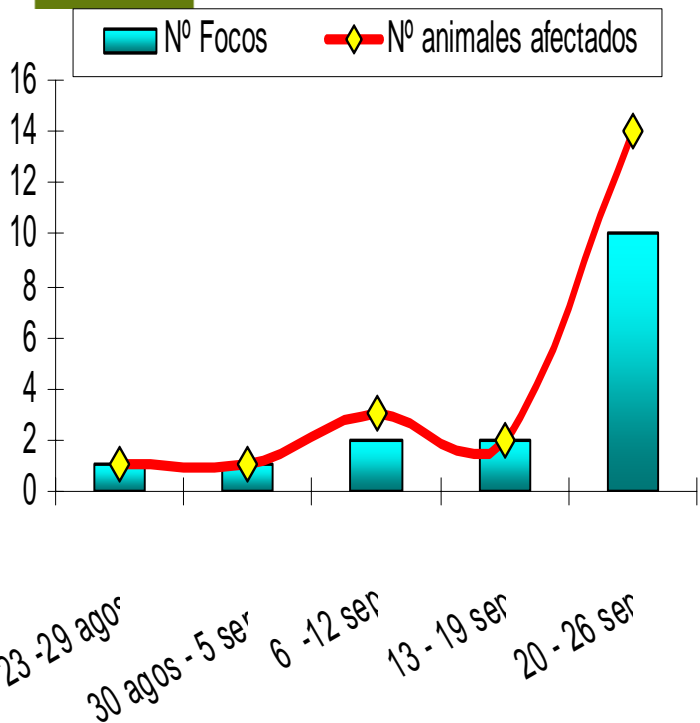
3rd week (6- 12 september)





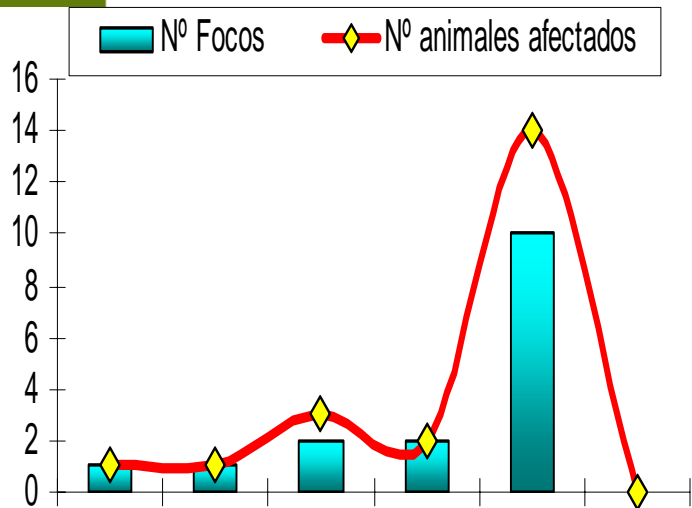


5th week (20- 26 September)

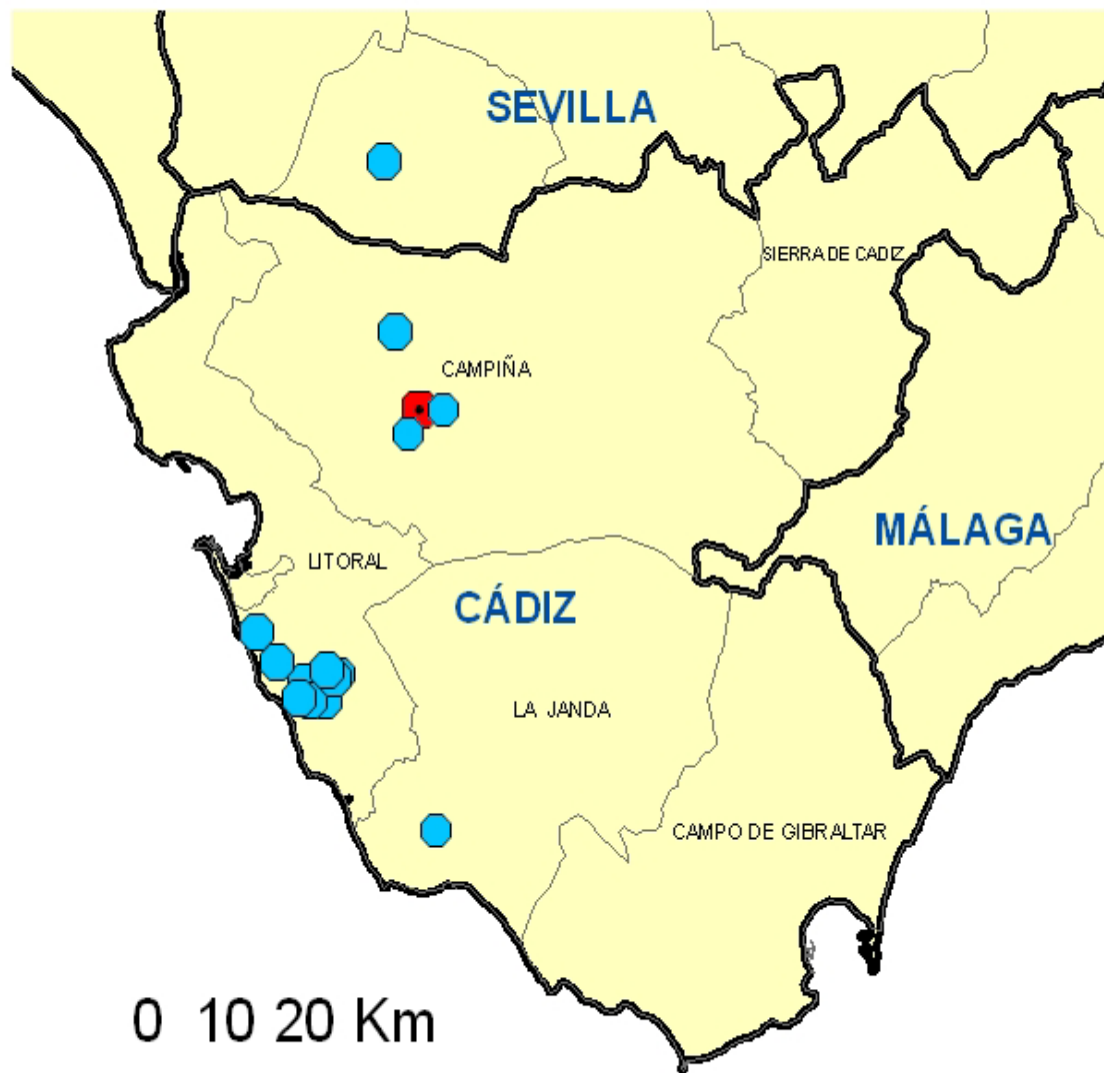




6th week (27 september–3 october)



23-29 ago
30 agos - 5 sep
6 - 12 sep
13 - 19 sep
20 - 26 sep
27 sep - 3 oct





MEASURES TAKEN

- ❑ Epidemiological research.
- ❑ Census of horses on farms and clinical examination.
- ❑ Vector control.
- ❑ Communication and collaboration with public health authorities.
- ❑ Increased surveillance of nearby equine farms and in wildlife.
- ❑ Authorised Inactivated WNV vaccine EU: Voluntary application.