
Seroprevalence of different orbiviruses in Algerian domestic animals

Medreonet, Third Annual Meeting, Lisbon

2nd -4th December 2009

BT was first diagnosed in Algeria in 2000
(serotype 2)

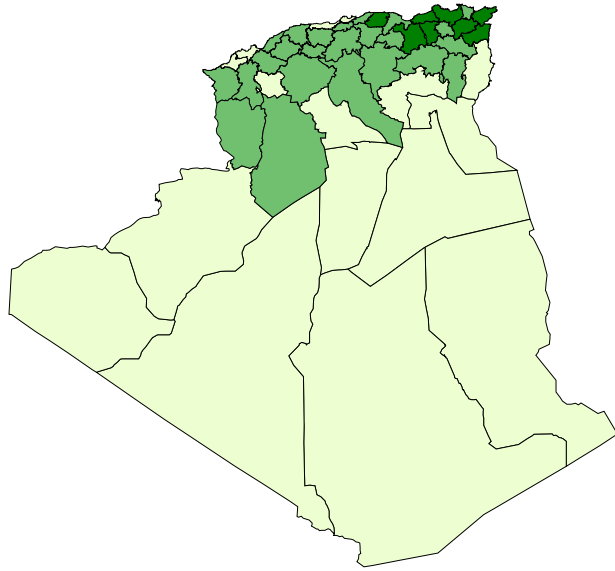
In 2006, 2008 and 2009 BT – serotype 1 was
also detected

In 2006 EHD – serotype 9 was detected.

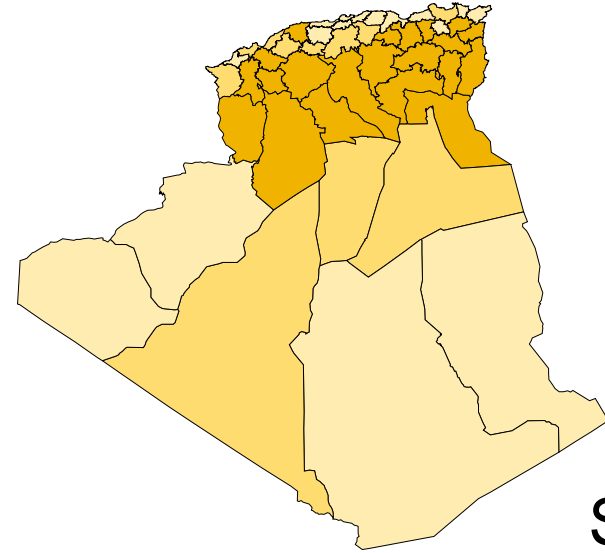
AHS has not been detected in the last decades
(ELISA, immunocapture antigen and trapping).

Vaccination against these viruses is forbidden

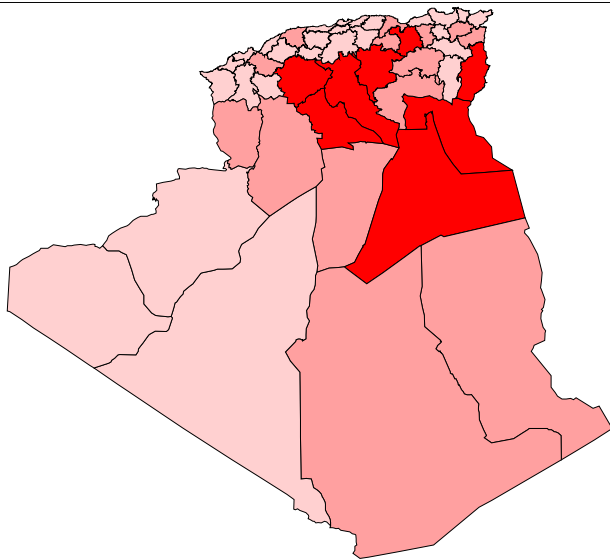
Census



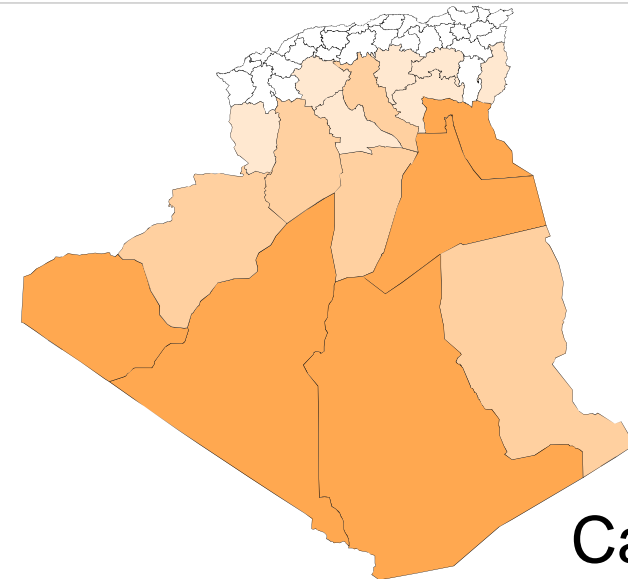
Cattle



Sheep



Goats



Camels

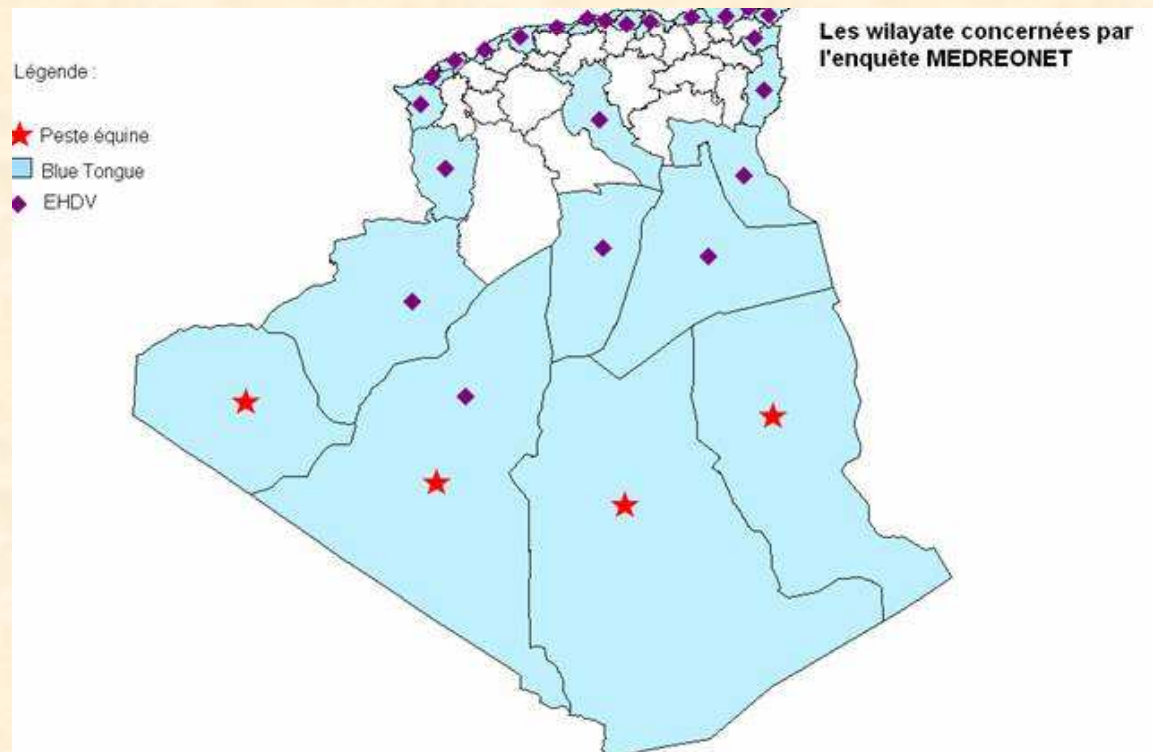
Survey

The survey was performed in cattle, small ruminants, camels and donkeys

- BTV: Cattle, sheep, goats and camels
- EHD: Cattle
- AHS: Donkeys and horses

Survey

- A cross-sectional study was carried out in August and September 2008
- 26 Wilayas (regions) out of 48



Epidemiological unit  The herd

Sample size, calculated to detect:

- 2% of positive villages
- 30% of within-herd prevalence
- 95% confidence level

 146 samples, stratified by regions

Laboratory tests

BTV: Competitive enzyme-linked immunosorbent assay (Pourquier)

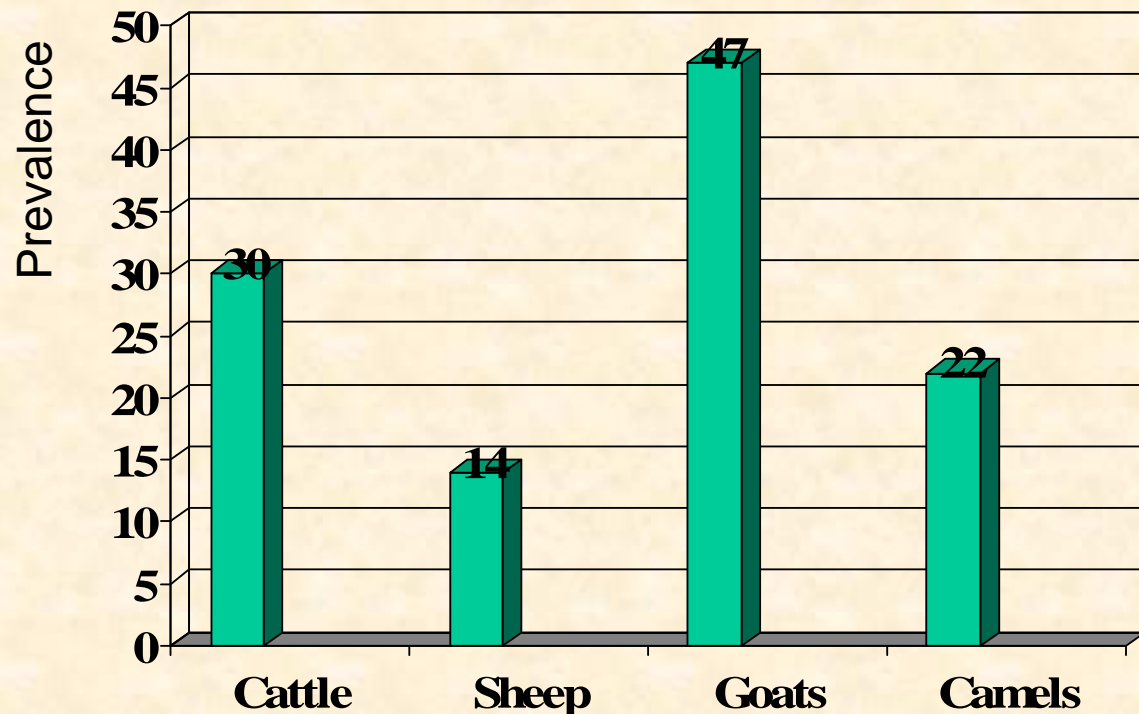
ASHV: Competitive ELISA (Ingenasa)

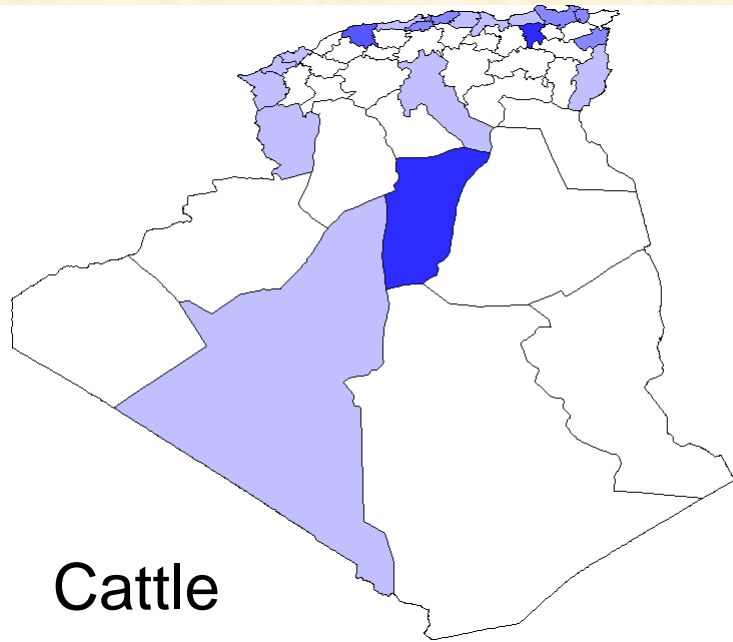
EHDV: ELISA (Pirbright laboratories).

Bluetongue

372 / 1423 positive samples (26.1%)

Positive animals were present in all *willayas*, except one that was negative.





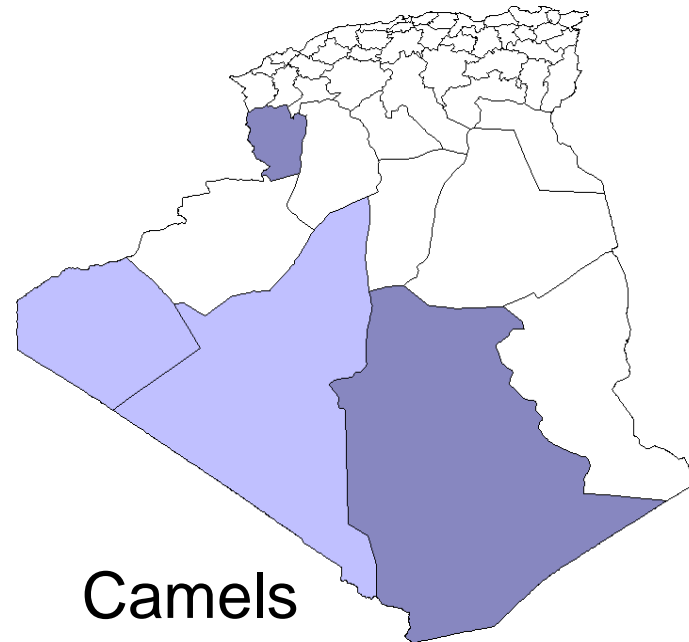
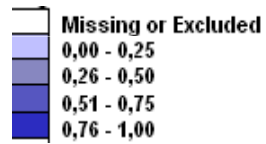
Cattle



Sheep



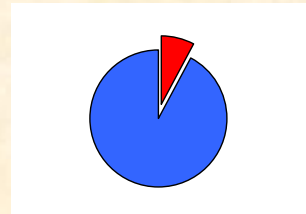
Goats



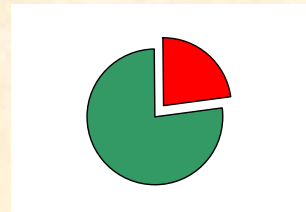
Camels

Epizotic Hemorrhagic Disease

66 / 849 cattle (7,8%, 95% CI: 6.2% – 9.9%)
presented antibodies against EHD.

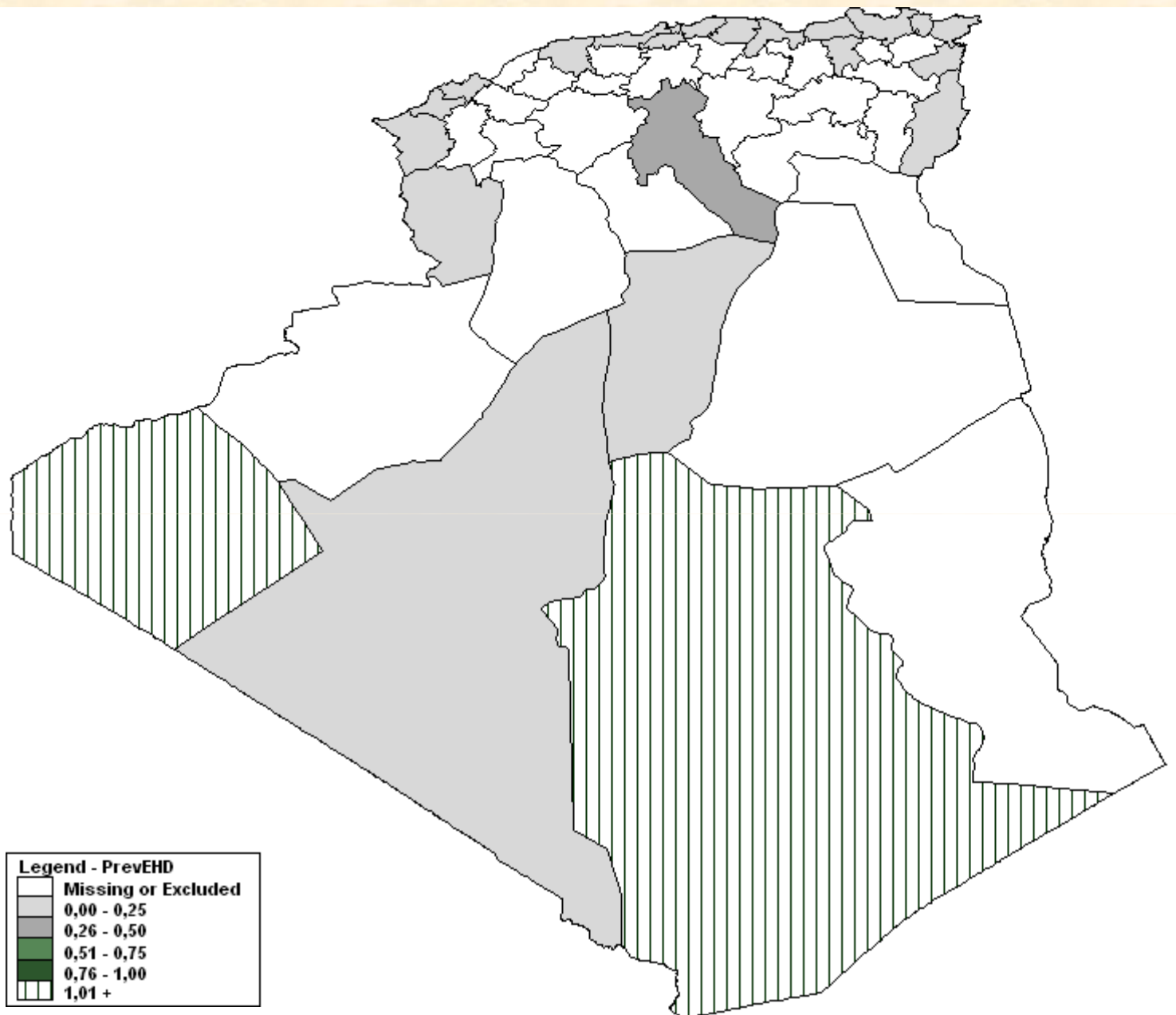


35 / 152 herds (23%) presented at least one
positive animal



Positive animals were detected in 12 of the
20 *wilayas* that were sampled.

EHD. Cattle



African horse sickness

AHS: Any of the 195 analyzed donkeys and horses (CI: 0% – 10.0%) was positive

Wilaya	Herds	Animals
Tamanrasset	22	44
Adrar	16	96
Tindouf	49	55
Total	87	195

Discussion

- The first description of the prevalence of Orbiviruses in Algeria.
- All cases are recent infections (young animals < 1 year), indicating virus circulation
- The geographic variation can be attribute to different causes (animal density, previous cases, climate,...)
- AHS not present in the country



Thank you for your attention