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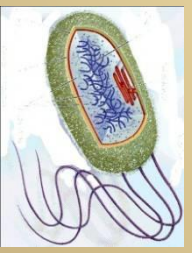
Most prevalent bacterial diseases in Ukraine, their diagnosis and treatment

Ukraine
2017

Main infectious diseases of animals and poultry in Ukraine

Disease	Still at the beginning of 2016	Discovered in 2016	Still at the end 01.10.2016
African swine fever	10/-	52/1159 (sick animals)	23/-
Rabies	372/-	730/869	274/-
Leukemia cattle	9/1654	3/856	10/1671
Salmonellosis	1/-	13/1518333	2/
Emphysematous carbuncle (blackleg)	-	1/6	-/-
Anthrax	-/-	1/1	1/-
Cattle Tuberculosis	1/-	-/-	1/-
Leptospirosis	1/10	12/143	3/12



According to the State Service of Ukraine on food safety and consumer protection
http://www.consumer.gov.ua/ContentPages/Epizootichna_Situatsiya_Na_Teritorii_Ukraini/52/#

Main infectious diseases of animals and poultry January - December 2012-2013

Disease	Sick animals in 2012	Sick animals in 2013	Still on top 2014
Cattle Tuberculosis	311	332	-
Leptospirosis	601	637	40
Salmonellosis	31	177462	-
Blackleg	-	1/6	-/-
Anthrax	-/-	1/1	1/-
Rabies	1979	1518	-
Leukemia	333	1359	407

According to the State Service of Ukraine on food safety and consumer protection, http://www.consumer.gov.ua/ContentPages/Epizootichna_Situatsiya_Na_Teritorii_Ukraini/52/#

Epizootic situation in the poultry industry of Ukraine 01.01.2013

Disease	Revealed dysfunctional points / number of sick animals 01.01.2013	Revealed dysfunctional points / number of sick animals 01.01.2013
Tuberculosis	-	-
Listeriosis	-	-
Salmonellosis	9/24	3/177366
Staphylococcus	1/1	-
Streptococcocus	1/5	-
Pasteurellosis	6/84	2/3
Colibacteriosis/ Escherichia	27/360	16/45190
Aspergillosis	-	1/5000
Chlamydia	-	-

According to the State Service of Ukraine on food safety and consumer protection, http://www.consumer.gov.ua/ContentPages/Epizootichna_Situatsiya_Na_Teritorii_Ukraini/52/#

Data on leptospirosis of animals in Ukraine

region	2005	2006	2007	2008	2009	2010	2011	2012	2013
Crimea	-	58	15	-	-	10	13	-	-
Vinnitsa	420	1466	770	212	176	153	57	91	50
Volyn	-	-	-	-	21	-	160	-	-
Dnipropetrovsk	69	46	263	13	235	11	84	19	48
Donetsk	264	176	100	251	39	26	76	-	14
Zhytomyr	325	48	76	95	-	-	-	44	-
Zakarpattya	-	-	-	5	-	-	-	-	-
Zaporizhia	2	47	129	266	159	6	-	33	-
Ivano-Frankivsk	439	174	10	834	1233	42	54	94	-
Kyiv	-	-	83	-	-	-	-	-	55
Kirovohrad	69	-	-	21	76	8	96	-	-
Lugansk	4	-	45	-	-	-	-	-	-
Lviv	-	-	-	-	-	-	-	-	-
Mykolaiv	236	640	117	18	-	14	65	-	-
Odessa	321	-	-	86	-	-	-	-	-
Poltava	103	-	-	-	-	201	81	-	-
…									
Total	3098	3525	1951	2429	2480	1073	1107	601	637

Incidence of leptospirosis in Ukraine (informational materials)

http://www.moz.gov.ua/ua/portal/info_leptospirosis_20150807.html

- **2008-2015 a decrease in disease**:
- 2012 – 0,69 per 100 000 people (316 cases)
- 2010 – 1,38 per 100 000 people (632 cases)
- 2014 – 1,04 per 100 000 people (473 cases)

Recorded cases in all regions (except Donetsk and Lugansk regions - missing data)

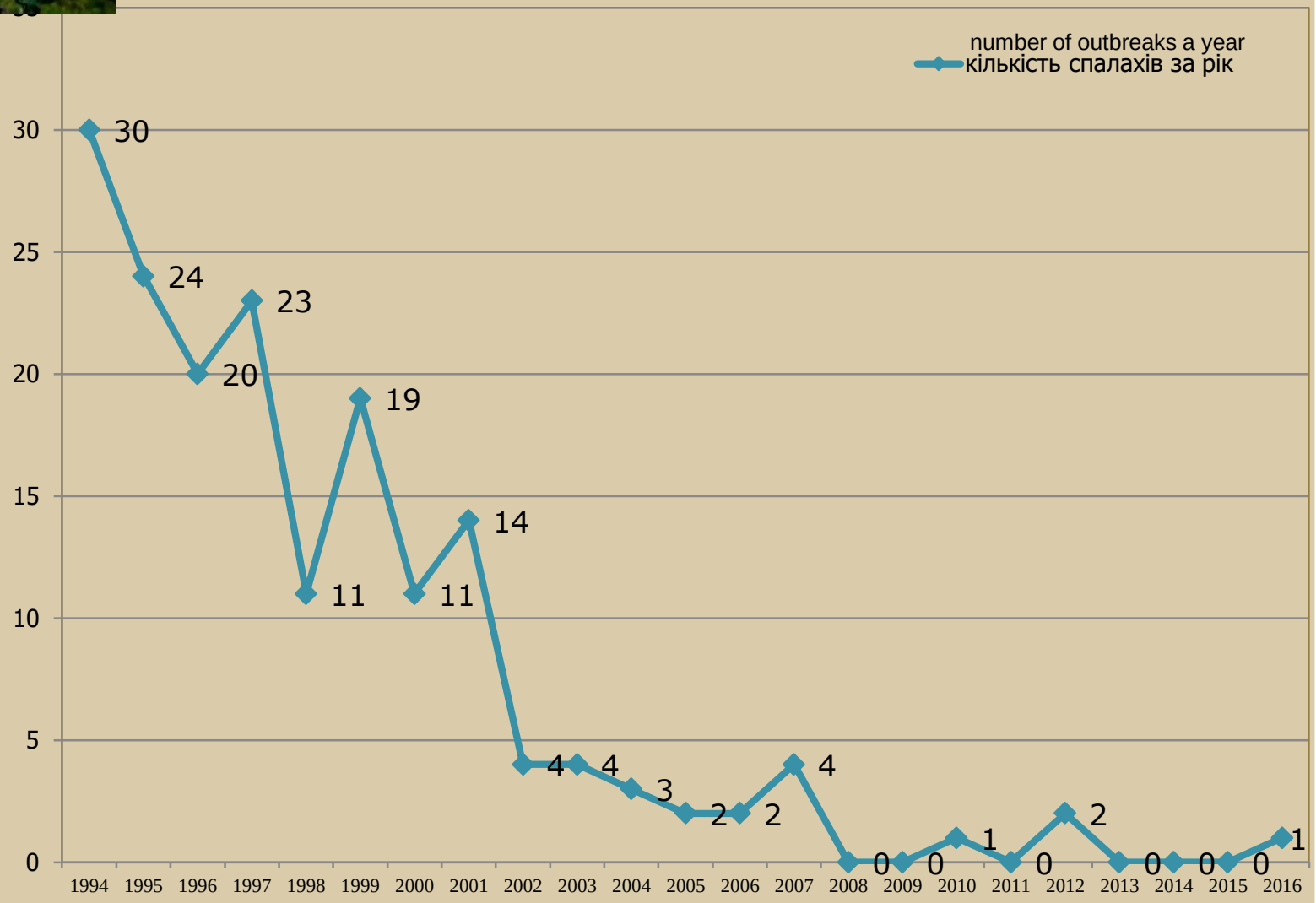
June 2015 (22 cases – Khmelnytskyi and Sumy regions, 8 cases – Kyiv, 11 cases Kyiv regions)

2016 - a sharp increase (Kyiv – 12 cases during 8 months, a human fatal case in Volyn region

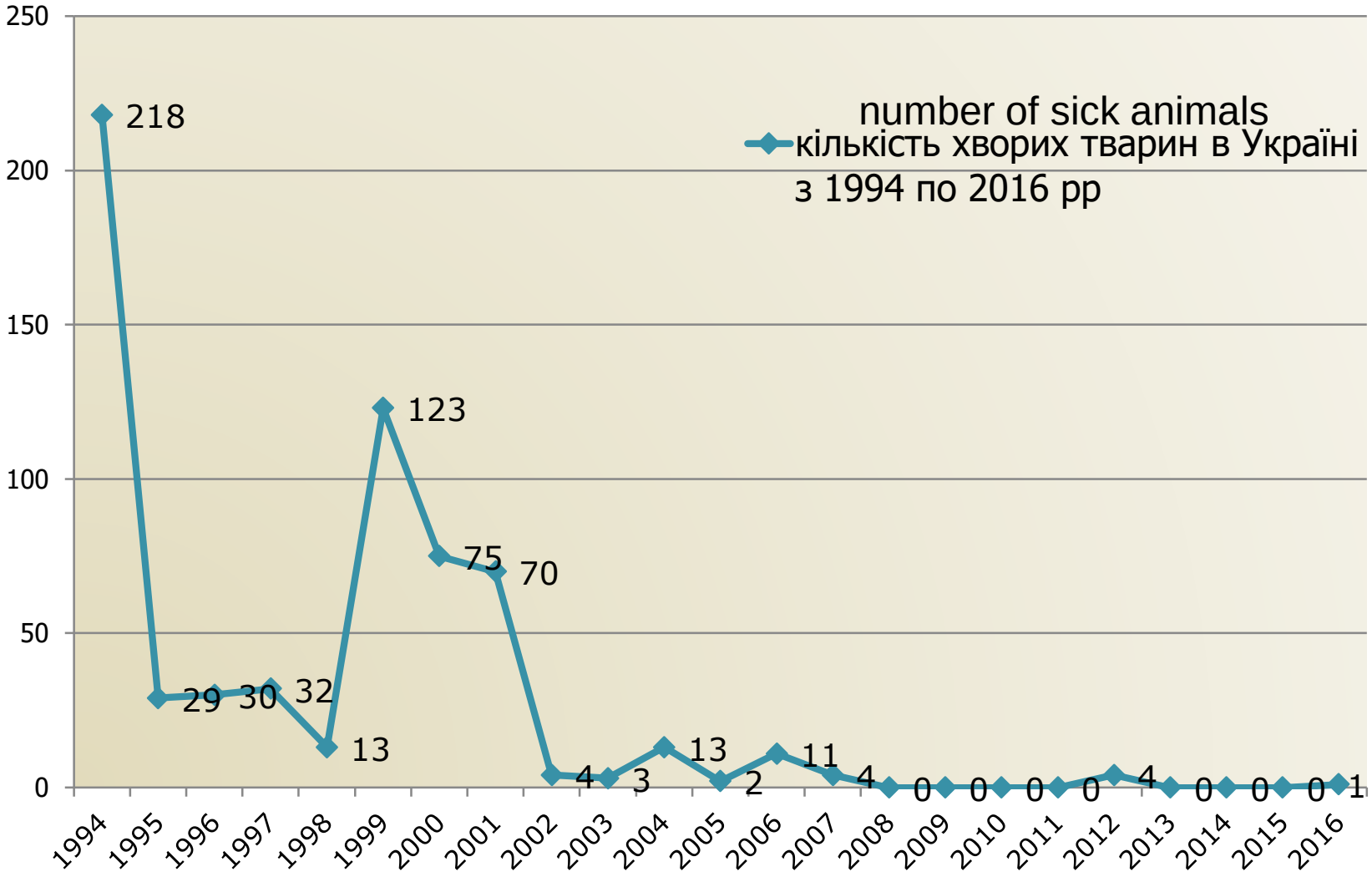
Highest incidence in areas

- Khmelnytsky 4.2 / 100 000 (55 cases)
- Ternopil 3.26 / 100 000 (35 cases)
- Kherson 2.79 / 100 000 (30 cases)
- Ivano-Frankivsk 2.25 / 100 000 (31 cases)
- Transcarpathian 2.24 / 100 000 (28 cases)
- Kirovohrad 2.73 / 100 000 (27 cases)

Graph of outbreaks of animal anthrax in Ukraine from 1994 to April 2016



The largest number of sick animals in Ukraine was registered in 1994 (218 animals), 1999 (123 animals), 2000 (75 animals) and 2001 (70 animals)



Anthrax (people's sickness rate)

- 1995–1999 – 92 sick people
- 1994 28 sick people; 218 animals
- 1997 38 cases; 32 animals
- 1999 14 cases; 123 animals
- 2001 9 cases; 70 animals
- 2008 1 case - 16.04.08 Mykolaiv region
- 2012 21 cases; 3 animals

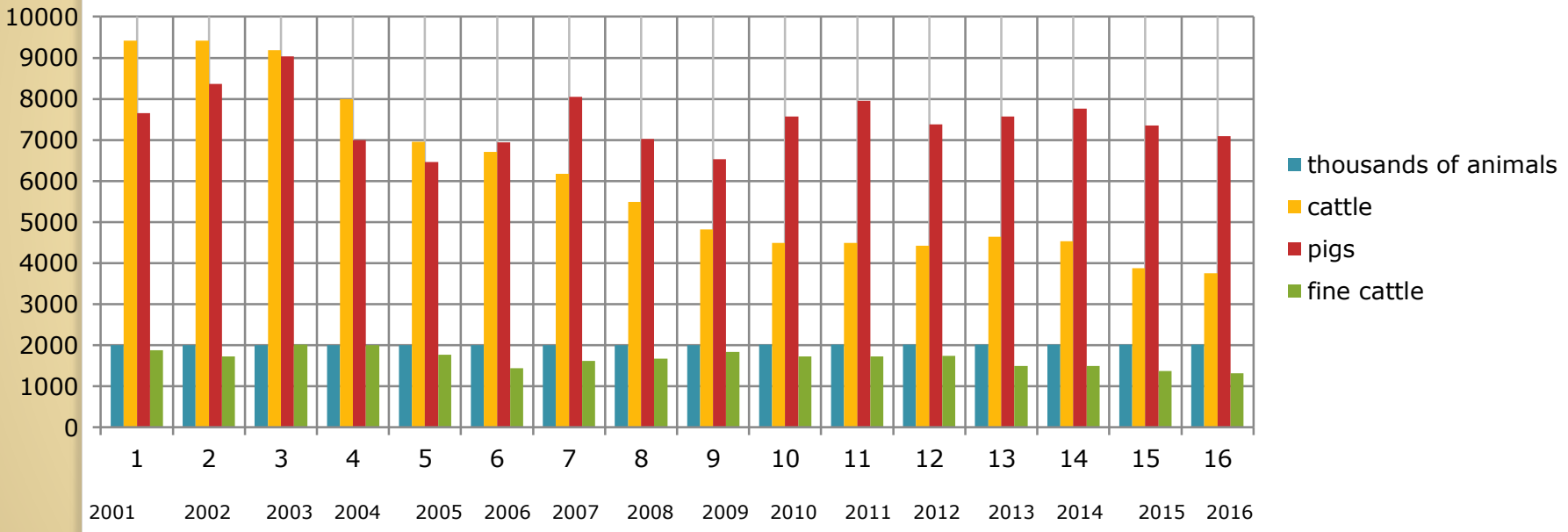
Anthrax (regions of Ukraine)

- The largest number of cases was registered in Vinnitsya (18), Cherkassy (13), Khmelnytskiy (13), Luhansk (13), Kharkiv (12), Volyn (12) and Odessa (12 cases).
- The disease was not registered in Zhytomyr region for 21 years. However, there was the only registered case of a sick animal in Ternopil region.

Anthrax outbreak in 2016

- The diagnosis is confirmed 19.03.2016 (in meat of a sow which was held on the farm of Chuhuev district, Kharkiv region).
- The specialists of veterinary services removed and disposed the remains of meat and fat of the sick animal.
- Over 17 people who had contacted and used substandard products have been placed under medical observation. Signs of the disease were not found.
- Previous cases in this area were reported in the village of Maspanovo, Chuhuev district in 1998.

Number of cattle farms in Ukraine, thousands of animals

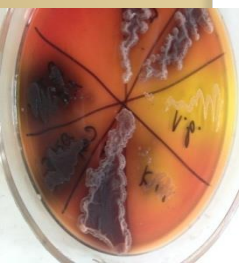


Diagnosis of infectious diseases

- Laboratory diagnosis of infectious diseases is carried out by a network of state laboratories of veterinary medicine. The central diagnostic facilities are located in the State Research Institute of Laboratory Diagnostics and Veterinary Expertise (Kyiv).

- There are recommendations and guidelines approved by the Veterinary Service of Ukraine for each infectious disease.

- The State Scientific Control Institute of Biotechnology and Strains (Kyiv) carries out quality control of veterinary immunological products.



Treatment of bacterial infections

Treatment is complex and includes:

- Bacteria destruction by using antibiotics
- excretion of bacterial toxins
- Repair of damaged organs
- Alleviation of animals' condition and reduction of symptoms

- The use of antimicrobial drugs is controlled by the owner
- The use of antimicrobial drugs is based on sampling
- Agent selection, determination of sensitivity to antibiotics

Infectious diseases under surveillance

http://zakon3.rada.gov.ua/laws/show/z0714-16

- Tetanus
- Botulism
- Infection with enterohemoragic E.coli
- Leptospirosis
- Anthrax
- Salmonellosis
- Tuberculosis
- Listeriosis
- Brucellosis

Results of non rational using of antibiotics

In dairy farm in Kiev region a vet. used antibiotics without antibioticogram for treatment necrobacteriosis.

Before treatment

After treatment

In samples was isolate *F.necrophorum and E.coli what were resist for B-lactam, cephalosporine antibiotics. As next results farmer have a lot accidents of mastitis and endometritis.*


Merci de
votre attention!!!
Thank you
for your attention!!!