

FARM USE OF ANTIMICROBIALS AND TTIP

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IATP Webinar 24 July 2014

BOX 9.7 Advertising antibiotics – how much has changed?

FARMING WITH OTHER PEOPLE'S MONEY

farmer

AND STOCKBREEDER

11 JUNE 1968 1s 3d Weekly

**The great pig race
READY - STEADY - GROW**

The importance of CYFAC* fortnight

that combines AUREOMYCIN † chlorotetra-

Is respiratory disease holding your pigs performance back

If so, take the brakes off, and consider Pulmotil
at weaning, 3 million pigs¹ can't be wrong!

**A flying start delivering
lifetime performance**

Talk to your veterinary surgeon,
or contact Elanco on
Freephone 0800 389 3658



Pulmotil is a trademark of Eli Lilly and Company.
Pulmotil contains tilmicosin
Legal category: POM-V

**As with all prescription only medicines,
consult your veterinary surgeon before use.**

Further information is available from:
ELANCO Animal Health,
Kingsclere Road, Basingstoke,
Hampshire, RG21 6XA

Ref 1, Elanco Sales Data

Brought to you by
the makers of

Pulmotil.

ELANCO

In UK and some other EU countries therapeutic ABX widely promoted for routine preventative use, often mentioning increased growth rates, as an alternative to the banned growth promoters.

Denmark and Sweden led the way to genuine reductions and since emergence of ST398 the Netherlands has achieved huge reductions in ABX use too.

Goodbye

- my trusted friend

Hello



- to Aivosin, the brand new macrolide antibiotic

In comparative trials, Aivosin at 50ppm for just 7 days achieved the same results as 21 days of Tylosin at 100ppm¹. That's the same results at half the dose in a third of the time.

Equally impressive, when compared to Valnemulin under field conditions, Aivosin delivered significantly better feed conversion².

And with an inclusion rate of just 1kg per tonne plus a withdrawal period of just two days, it's time you talked to your vet about Aivosin.



Enzootic Pneumonia

 Schering-Plough Animal Health
EXPERTISE... COMMITMENT... VALUE

AIVOSIN 42.5mg/g Premix, contains Acetylisovalerylytylosin Tartrate [MFS]. Always consult your veterinary surgeon. AIVOSIN is a trademark of ECO Animal Health Ltd. Further information is available from: Schering-Plough Animal Health, Division of Schering-Plough Ltd, Breakspear Road South, Harefield, Uxbridge, Middlesex, UB9 6LS. T: (01895) 626000 F: (01895) 672429. References 1. ECO/MHYO/1/NK/015 2. ECO /UK/003a.

Antibiotic growth promoters advertised for routine prophylactic use after EU ban

ANNUAL UNITED KINGDOM SUBSCRIPTION: £10
OVERSEAS SUBSCRIPTION: £45

IN ASSOCIATION WITH NATIONAL PIG ASSOCIATION
FREE TO NPA MEMBERS

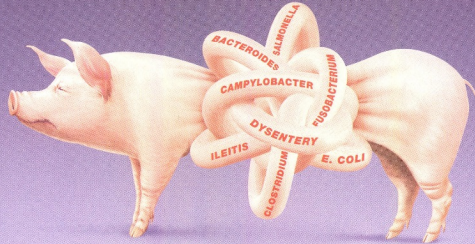


PIGWORLD

ISSN 0966 3592

THE UNITED KINGDOM PIG INDUSTRY JOURNAL

MARCH 2009



Diarrhoea



Sorted

Facing problems with...

- ✓ ileitis?
- ✓ swine dysentery?
- ✓ bacterial enteritis?
- ✓ secondary infections?
- ✓ all of the above?

For the treatment and control of ileitis, enteritis, dysentery and all major causes of bacterial diarrhoea in pigs – with Linco-Spectin Premix you've got it sorted

Linco-Spectin™
PREMIX

Pfizer Animal Health

For further information please contact your veterinary surgeon or Pfizer Animal Health, Watson Oaks, Donkey Road, Watton on the Hill, Tadworth, Surrey KT20 7NS, D: 737 331 333
Linco-Spectin Premix (MPS) contains: miconizol hydrochloride and spectinomycin sulphate. #H010109

The stuff of legend

For over 20 years Tylan from Elanco has been giving your pigs just what they need to grow and stay fit, strong, healthy and happy.

Whether you need to control looseness, poor growth and weight variation due to ileitis, or respiratory disease due to Mycoplasma, you can rest assured that Tylan Premix or Tylan Soluble will do the job.

With Elanco you don't just get the product – our medicines are produced locally to stringent quality assurance standards which deliver the consistency and peace of mind that your business requires.

In addition we are standing by with a dedicated and highly knowledgeable team to provide and fund such services as blood testing, on-farm diagnostics, pig weighing and business management.

We are proud to support your business and your industry.

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Tylan

Tylan is a trademark of Eli Lilly and Company. Tylan contains tylosin. Legal category: POM-V
ALWAYS CONSULT YOUR VET BEFORE USING
Further information is available from: Elanco Animal Health, Ltd, Priory Road, Basingstoke RG24 9NL

EL381

Avoparcin – vancomycin in disguise

1995 - UK
Avotan
(avoparcin)
added to feed on
a daily basis for:
98% chickens
80% pigs
30% cattle

With no
withdrawal
period



**"I'm not worried about a hormone ban.
I use AVOTAN* and get a tonne of liveweight
gain a week from a hundred animals."**

George Adamson - Warrington

AVOTAN is not a hormone and is widely
available. It is not absorbed into the
bloodstream and cannot leave residues in
the meat.

CYANAMID
Company of Cyanamid (UK) Limited,
Cyanamid Group, Fareham Road,
Gosport, Hampshire PO13 0AS
Telephone 02031 624000



*Registered Trade Mark

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AVOTAN

**The multi-species
performance
enhancer**

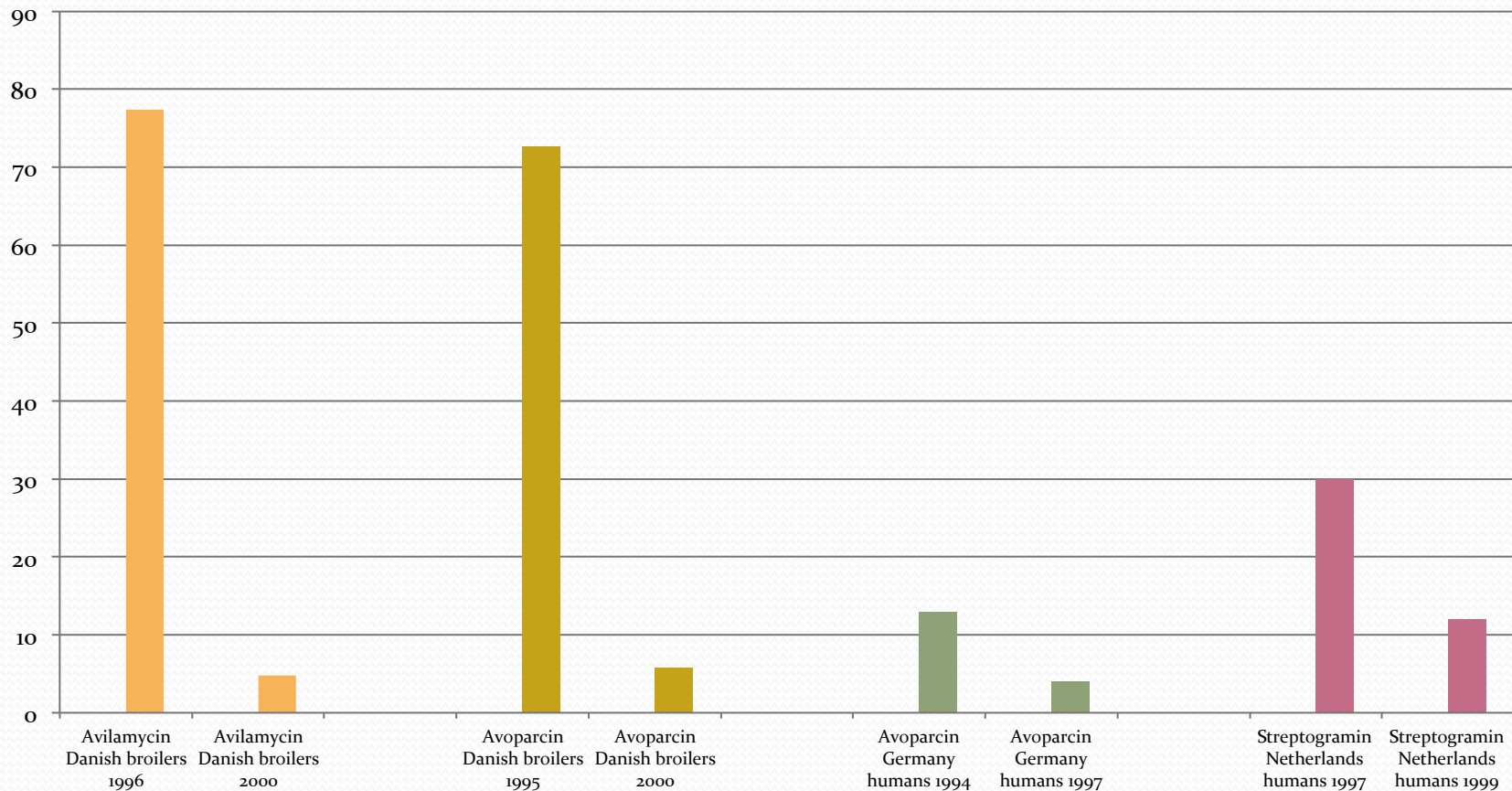
CYANAMID

Cyanamid UK Animal Health Division, Fareham Road, Gosport, Hants PO13 0AS
*Registered Trademark

Lower use usually means lower levels of resistance

- Countries with low levels of use of farm antibiotics generally have much lower levels of resistance in zoonotic bacteria in animals, meat and humans (*E. coli*, *Salmonella*, *Campylobacter*, *Enterococci*). Examples: Sweden, Denmark, Norway, Finland.
- Animal species with lower levels of use have lower levels of resistance: Defra showed that 92.1% of *E. coli* from pigs were resistant, but just 5.7% from cattle and 3% from sheep (poultry not included). Approximately 95% of farm antibiotic use in the UK is in pigs and poultry.

Resistance to growth promoters fell after bans



Source: Nunan C and Young R, Soil Association

Livestock to human

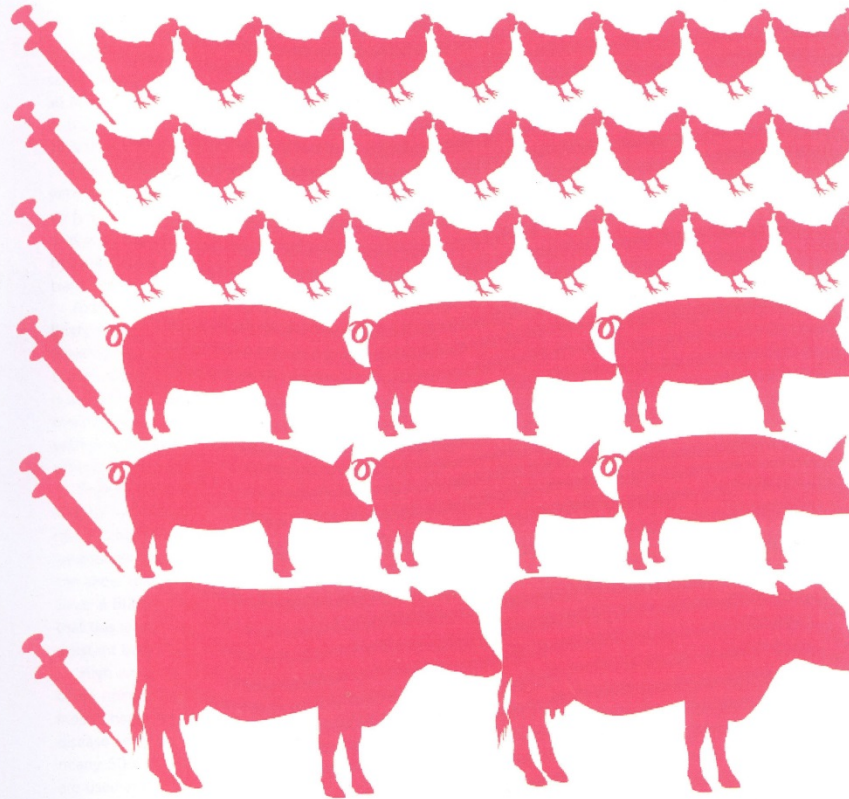
- Salmonella and Campylobacter
- **E.coli** (and Kluyvera) – Salmonella, Shigella (dysentery), (Klebsiella ? Acinetobacter? Pseudomonas? *Neisseria gonorrhoeae*?)
- Enterococci
- Staphylococcus aureus
- Clostridium difficile

MRSA in farm animals and meat
A new threat to human health



Soil Association

E. coli superbugs on farms and food



Soil Association

Resistance can spread to humans:

MRSA

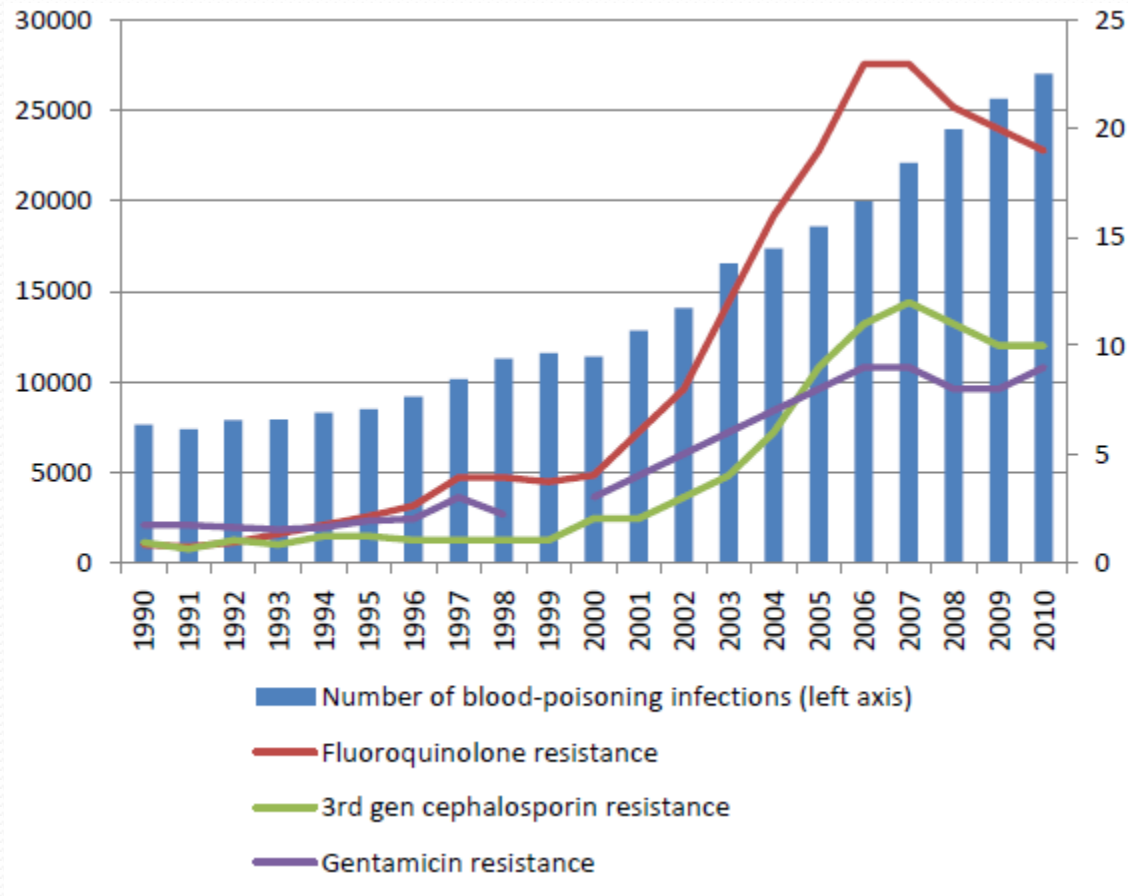
- In the UK, MRSA is still primarily a ‘hospital superbug’.
- Two different types of MRSA (ST398 and mecC) have been found in a small proportion of UK milk samples.
- Both types of MRSA can cause serious infections in humans and have done so in the UK. Evidence suggests that ST398 came from humans, acquired methicillin and other resistance in farm animals, and then transferred back to humans (and on to other farm animals).
- Abroad, many new types of MRSA now being found in farm animals, including some epidemic in humans: ST1, ST5, ST8, ST9, etc. Some scientists concerned about huge size of MRSA reservoir (ST398 particularly). Developing situation – PVL virulence gene has now been found in MRSA ST398 in pigs. MRSA with PVL genes can cause very serious infections and are more common in the community.

Resistance can spread to humans:

E. coli

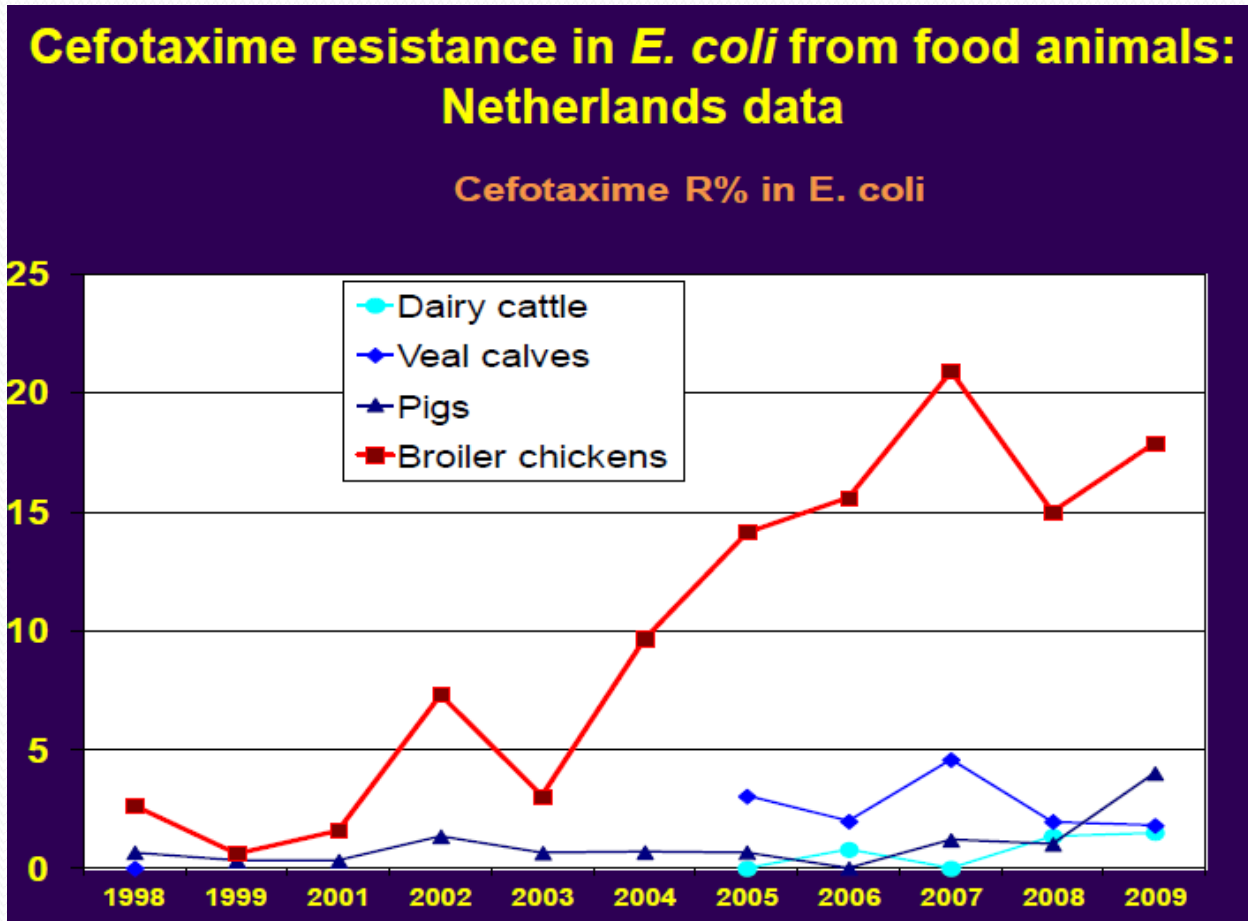
- Tracing the spread of resistance from E. coli is more difficult than with Salmonella because we each have an average of 4 resident E. coli strains in our gut.
- EFSA says that it is 'highly likely' that resistance genes spread from E. coli on food to E. coli in our intestines.
- Example - A streptothricin antibiotic was used in pigs in East Germany but no equivalent then used in humans. Resistance was first found in porcine E. coli, then human E. coli, then human Salmonella and Shigella (dysentery).
- A French study found that feeding volunteers a sterile diet led to large falls in resistant E. coli but insignificant falls in sensitive E. coli, which shows the resistance was in food.

Rise of E. coli blood poisoning and antibiotic resistance UK 1990-2010



Source: Soil Association, 2012. *E. coli* superbugs in farm animals and food

ESBL resistance trends in farm animal E. Coli - Netherlands



Source: Dik Mavius, used in HPA presentation

Resistance can spread to humans: Salmonella

- A new epidemic multi-drug resistant strain of Salmonella - monophasic Salmonella typhimurium, has emerged in Europe.
- HPA and VLA and other scientists say pigs are 'the likely reservoir of infection', but also now in cattle.
- Imported beef has also caused a major outbreak in four schools in France.
- EFSA estimated (2012) that 56.8% of all salmonella infections in EU now originate from pigs.

Resistance can spread to humans: Campylobacter I

- EFSA says ‘Resistant Salmonella and Campylobacter involved in human disease are mostly spread through foods.’
- Before fluoroquinolones were introduced to farming in 1990s, no human cases of Campylobacter were resistant unless a patient had prior exposure to fluoroquinolones. By 2007, 46% resistant.
- DoH advisory committee said increase in human resistance ‘followed the extensive use of enrofloxacin, a ciprofloxacin analogue, by the poultry industry’.

Resistance to critically important antibiotics (CIAs)

- Countries with little or no, use of CIAs in farming have much lower levels of resistance in farm animals, meat and humans (e.g. Australia, Denmark, Finland).
- A recent voluntary ban on use of cephalosporins in Danish pigs has led to a statistically significant fall in ESBL resistance in pigs.
- In contrast, Danes have not used fluoroquinolones in poultry for two years and resistance in *Campylobacter* (but not *E. coli*) has increased; similar problem in the US. This may be due to increased use of biocides.

CIAs:

- Coliscour – a polymixin
- Naxel – a 3rd gen. cephalosporin
- Zuprevo – a new macrolide
- Cephaguard DC – a 4th gen. cephalosporin

medication

Coliscour
Drowns out *E.coli* and *Salmonella* spp.

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Tel: 01494 781510 Fax: 01494 781519 www.ceva.co.uk

Speak to your veterinary surgeon about these products. Further information available here.

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One Shot - Full Therapy

NAXCEL
(Ceftriaxone Free Acid) Suspension for Injection

ONE SHOT • FULL THERAPY • COMPLETE CONFIDENCE

The single injection, longest-acting antibiotic for...

- ✓ Treatment of lameness and septicæmia caused by *Streptococcus suis*
- ✓ Treatment of major causes of bacterial respiratory disease*
- ✓ Younger pigs – specifically designed for young, growing pigs
- ✓ Fast onset and long action – typically lasts 7 days or more
- ✓ Complete confidence – one injection provides full therapy

*Intravascular, Actinobacillus pleuropneumoniae, Pasteurella multocida and Streptococcus suis

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ZUPREVO
for cattle pneumonia

Starts fast, works longer

RAPID
High lung concentration within 4 hours
Starts fast to help prevent lung damage that will impair future performance

SUSTAINED
Up to 28 days active presence in lung tissue!
Works longer to minimise the chance of relapse and help reduce the risk of disease spreading

Cattle pneumonia hits hard, fast and it lasts. This can lead to:

- Irreversible lung damage
- Reduced daily weight gain
- Substantial economic loss

How can you reduce the impact on your herd?

Always use medicines responsibly.
There are guidelines for responsible use. For more information on responsible use of medicines, visit www.vetresponsible.org

ZUPREVO 180 mg/ml solution for injection for cattle

MSD Animal Health

Think deep.
NEW Dry Cow Therapy
Dives Deep into the Udder.

Cephaguard DC is the new dry cow therapy specially formulated to reach the entire udder, targeting bacteria responsible for high somatic cell counts*.

This broad spectrum antibiotic, cefquinome results in high cure rates making it a highly effective dry cow therapy.

When it's time to dry off - Think Deep... Try NEW Cephaguard DC.

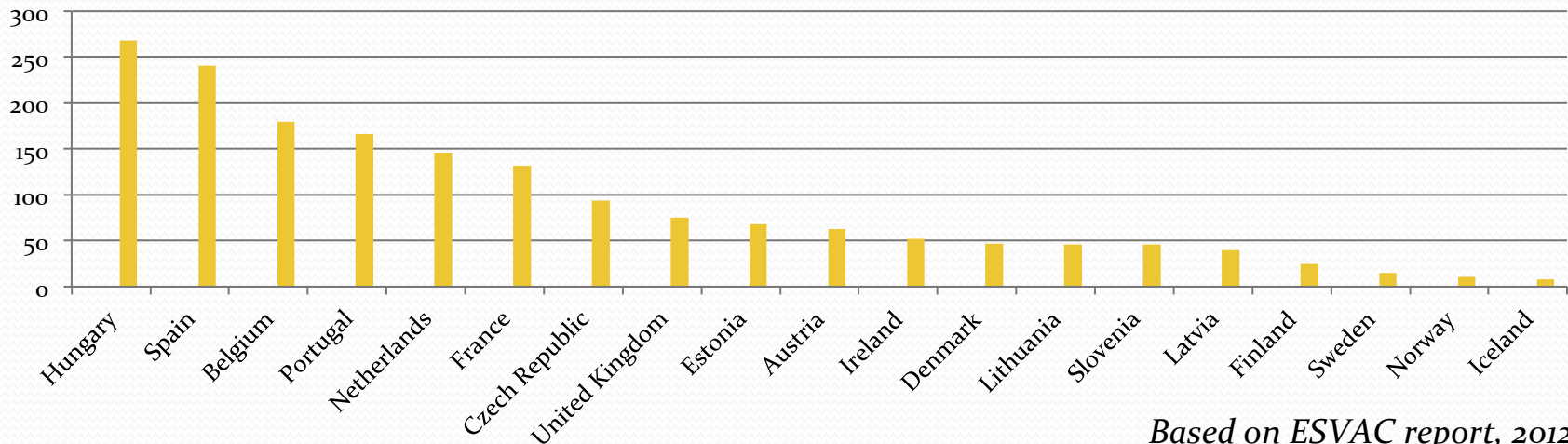
Cephaguard DC

Resistance can spread to humans: enterococci

- Like *E. coli*, enterococci are normal inhabitants of human gut, but can sometimes cause serious infections.
- Experiments have shown that farm-animal enterococci can transfer resistance genes to human enterococci in the human gut.
- EFSA says: ‘the reservoir of VRE [Vancomycin-resistant enterococci] in food-producing animals presents a definite risk of resistance genes being transferred to virulent human strains through food and other routes’.

Data on farm antibiotic usage from different countries can mislead

**Veterinary antibiotic use in mg per animal population unit,
2010**



Graphs like this tell us nothing unless we have data to indicate the relative potency of the antibiotics used and the relative use in each species. E.g. in UK c. 60% of antibiotics are used in pigs, less than 5% in cattle, 0.3% in sheep. UK has many less pigs and many more cattle and sheep than most countries. True use in UK could be higher than in the Netherlands though graph suggests the opposite.

Approximate UK ABX use by species

Species	Percentage of total ABX use
Pigs	60%
Poultry	34.5%
Cattle	4%
Sheep	0.5%
Fish and other	1% ⁰

Source Veterinary Medicines Directorate

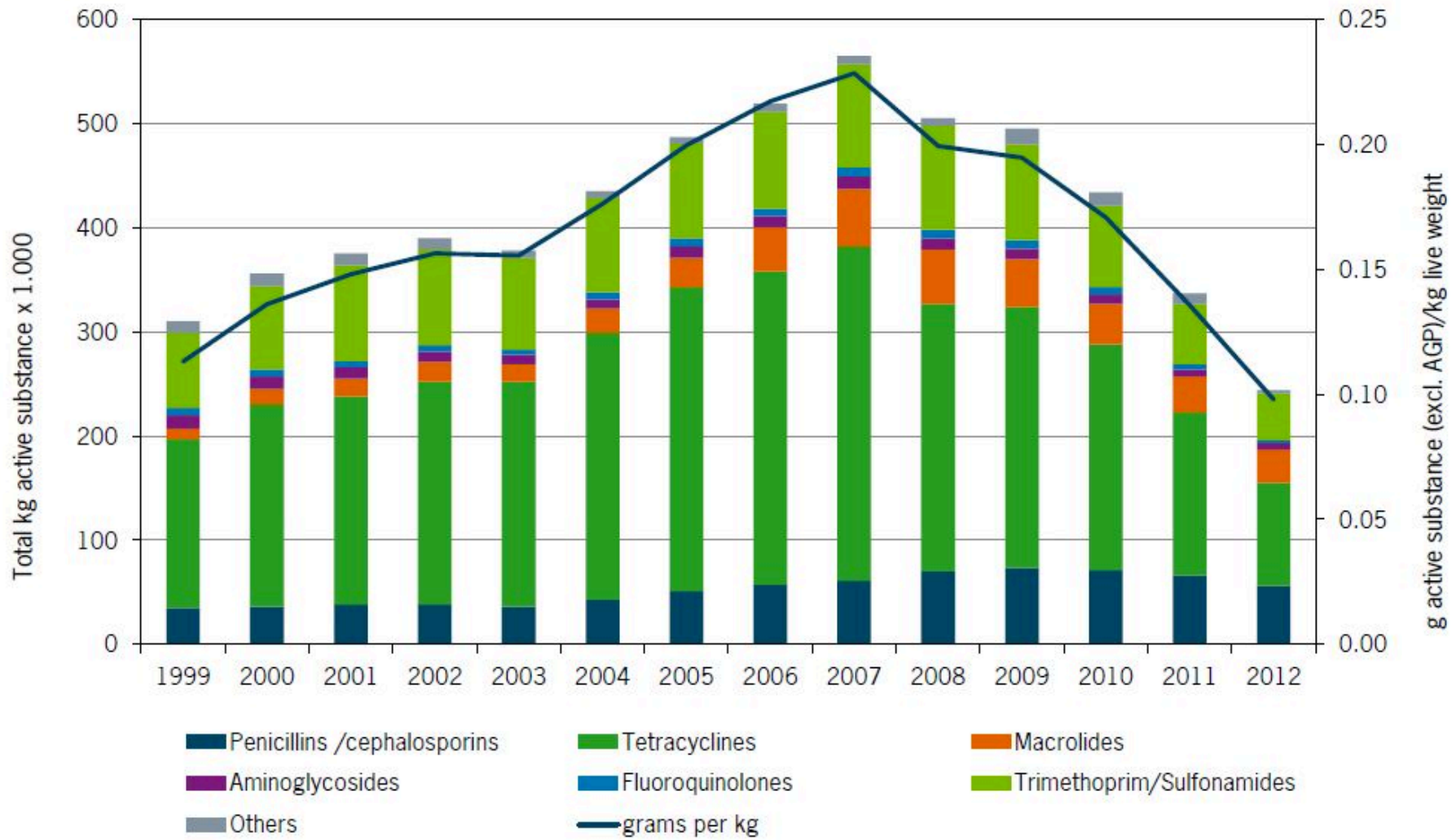
Five Nordic countries use 2-5 times less antibiotics per animal than UK

	Use per total animal PCU	Use per pig & poultry PCU	Pig PCU as %age of total PCU	Sheep PCU as %age of total PCU
UK	51	179	10.7%	39.6%
Denmark	43	54	74.1%	0.5%
Finland	24	59	35%	2.1%
Sweden	13.6	42	26.5%	6.2%
Iceland	6.3	64	5.3%	41.2%
Norway	3.7	36	7.5%	6.1%
Netherlands	65	110	47%	3%

Source: Alliance to Save Our Antibiotic, Evidence to Science and Technology Committee 2014 As augmented by Cóili

Figure 3.1

Therapeutic antibiotic sales, 1999-2012 a)



a) Sales for 2012 are estimates, based on preliminary data of the first half year.

Source: FIDIN (2012).

EU legislation and TTIP

Expecting new:

- Veterinary Medicines Directive
- Medicated feedingstuffs Directive
- EU-wide surveillance scheme for AMR in live animals and meat
- Guidelines for responsible antibiotic use

Why has nothing been published 2 years after all this was expected?

Antibiotic Campaign Groups

The Alliance to Save Our Antibiotics (ASOA) – UK-based EU-wide alliance with 33 member organisations.

Contact: Alison Craig: acraig@saveourantibiotics.eu

Latest report: [Click here](#) Petition: [Click here](#)

Antibiotic Resistance Coalition (ARC)– Global alliance of civil society groups from six continents

Launch press release: [Click here](#)

Declaration: [Click here](#)

Acknowledgement: I am indebted to C oil n Nunan, from the Soil Association and ASOA for help with this presentation