

ANTIMICROBIAL USE IN POULTRY PRODUCTION

Hector Cervantes, DVM, MS, Dip. ACPV
On behalf of the Poultry Industry



*2012 NIAA Annual Conference
Antibiotics Council Meeting
March, 27 2012
Renaissance Denver Hotel
Denver, Colorado*

USES OF ANTIMICROBIALS IN POULTRY PRODUCTION

- In-feed:

At low (subtherapeutic) levels to prevent subclinical diseases and maintain enteric health (the so called “growth promoter” use).

At higher (therapeutic) levels to control or treat diseases like necrotic enteritis or systemic *E. coli* infections.

USES OF ANTIMICROBIALS IN POULTRY PRODUCTION

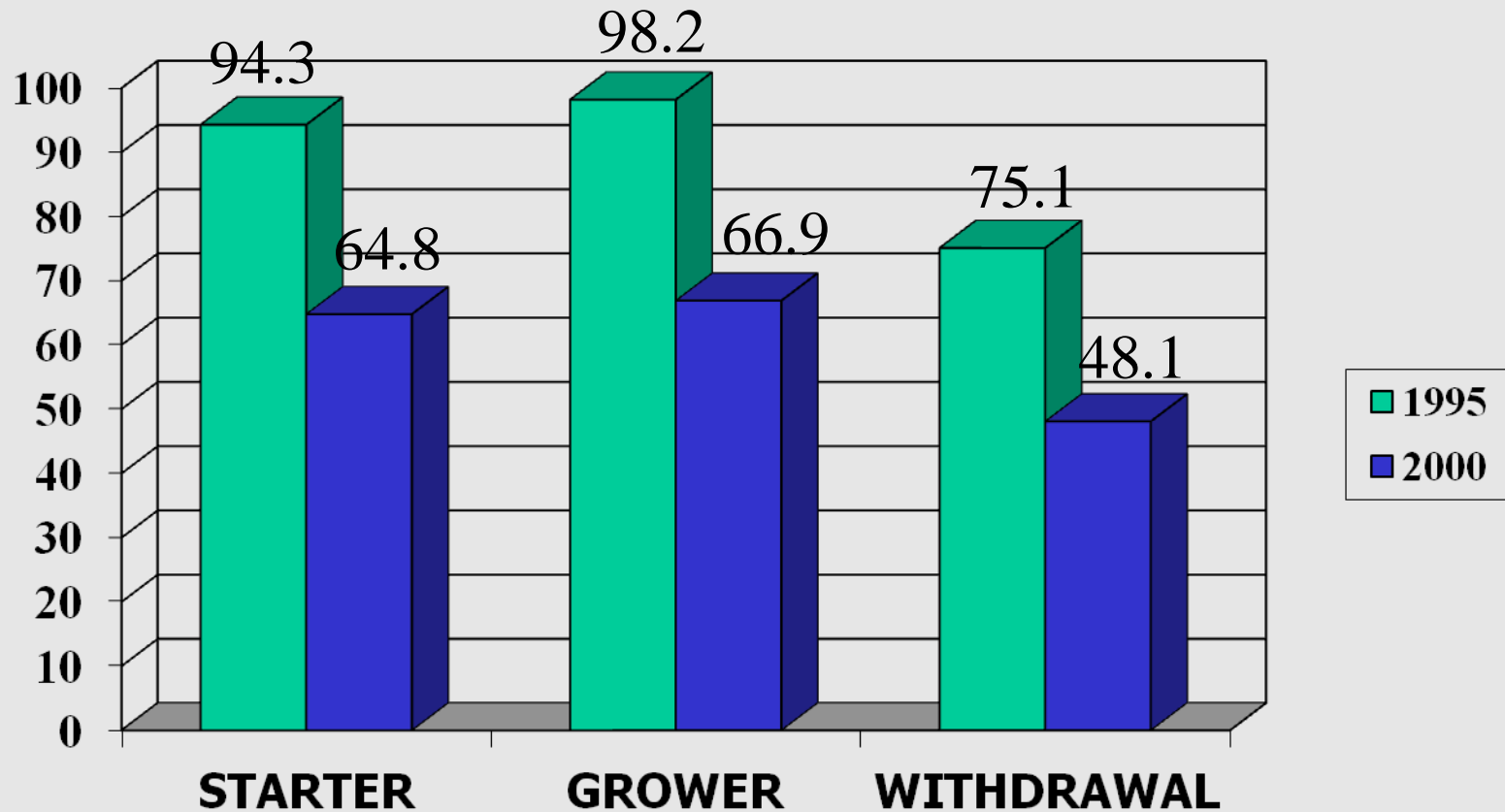
- Injected:
In-ovo or subcutaneously at day of age to prevent diseases like bacterial omphalitis.

At certain times to treat infectious diseases like bacterial airsacculitis or fowl cholera (usually in broiler breeder hens or turkeys).

USES OF ANTIMICROBIALS IN POULTRY PRODUCTION

- In drinking water:
To control or treat bacterial infections like chronic respiratory disease (CRD) or fowl cholera.

DOCUMENTED DECLINES ON USAGE OF IN-FEED ANTIMICROBIALS

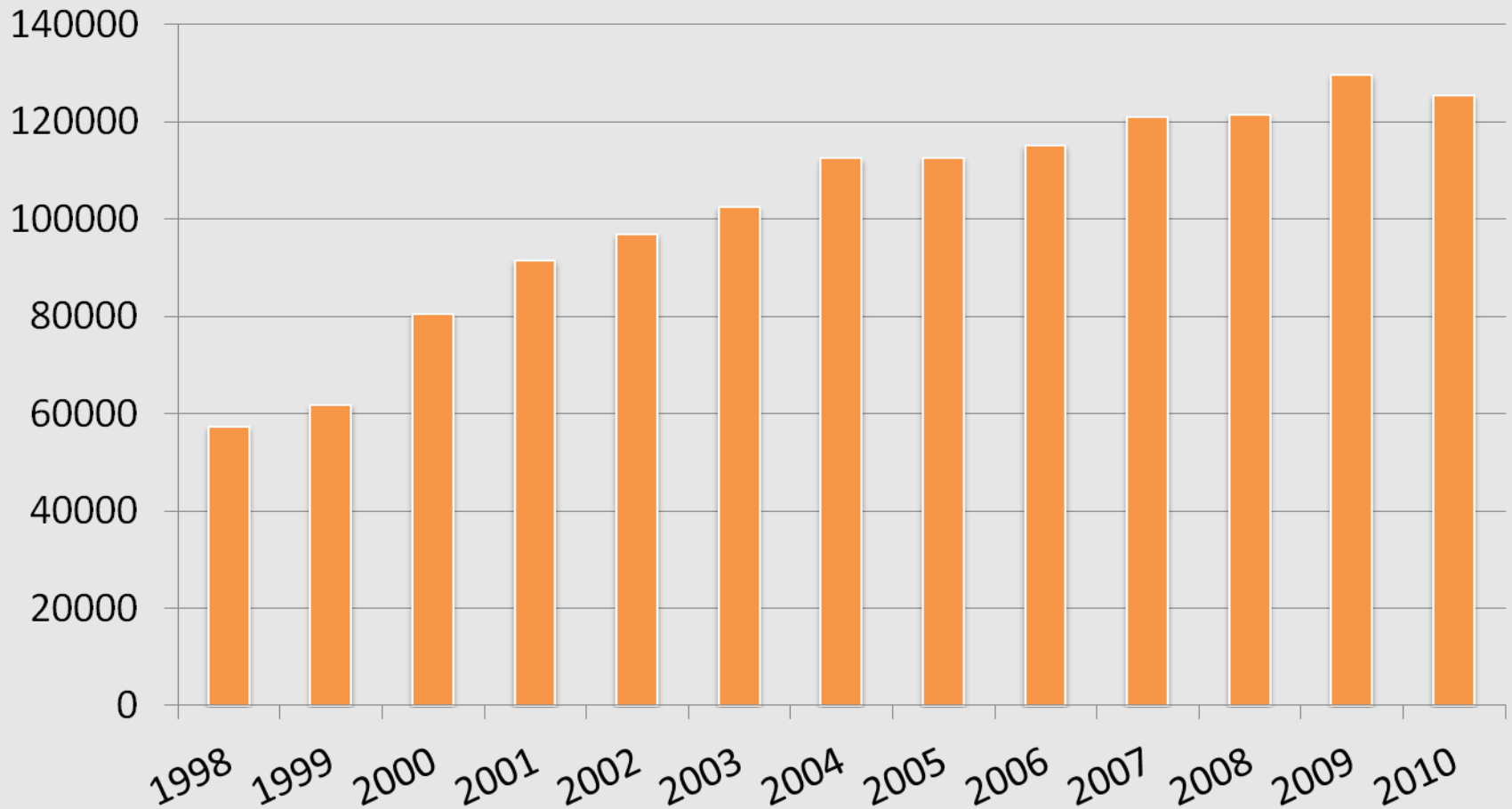


Source: Chapman and Johnson, 2002, Poultry Sci. 81:356-364

ANTIMICROBIALS IN-FEED

- It remains an important tool that poultry producers have at their disposal to ensure good enteric health is maintained and only healthy birds enter the food chain.
- Following the European Union (EU) bans of antimicrobial growth promoters (AGPs), poultry and animal health have deteriorated and therapeutic use of antimicrobials has increased.

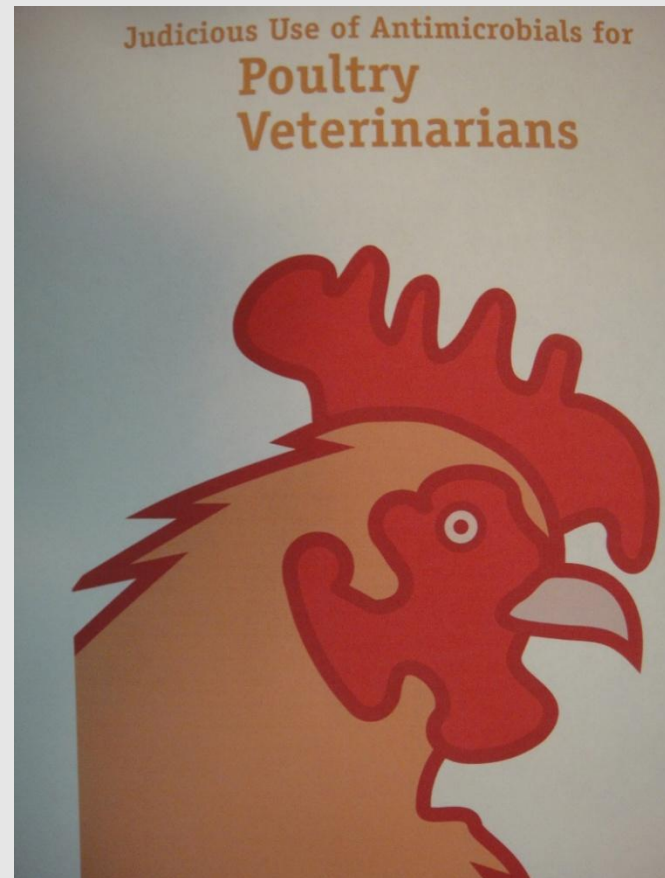
Denmark – Increases in Therapeutic Use of Antimicrobials Since the Ban of AGPs



Judicious Use of Antimicrobials for Poultry Veterinarians

Joint project with participation from:

- American Veterinary Medical Association.
- American Association of Avian Pathologists.
- Food and Drug Administration – Center for Veterinary Medicine.



USES OF ANTIMICROBIALS FOR THERAPEUTIC PURPOSES HAVE ALSO DECLINED

Reasons:

- Introduction of nipple drinkers.
- Implementation of judicious use principles.
- Introduction of tunnel-ventilated houses.
- Implementation of Best Management Practices.
- New vaccines & better vaccination programs.

USES OF ANTIMICROBIALS FOR THERAPEUTIC PURPOSES HAVE ALSO DECLINED

Reasons:

- Better biosecurity practices.
- Shorter production cycle.
- Increased production of drug-free and/or antibiotic-free poultry.
- Concerns about residues.
- Restrictions imposed by trading partners.

MISCONCEPTIONS ABOUT ANTIMICROBIAL USE IN POULTRY

MYTH

- Antimicrobials in feed are used to promote growth.

FACT

- Antimicrobials in feed even when used at levels labeled for “growth promotion” are used to prevent subclinical disease, immunologic stress, improve enteric health, flock uniformity and ultimately the safety of the food supply.

MISCONCEPTIONS ABOUT ANTIMICROBIAL USE IN POULTRY

MYTH

- Antimicrobials are used as “crutches” to raise poultry in unsanitary environments and poor management conditions.

FACT

- Poultry companies strive to raise flocks under optimal environmental and management conditions as this leads to good performance and profitability.

MISCONCEPTIONS ABOUT ANTIMICROBIAL USE IN POULTRY

MYTH

- Our meat supply is tainted with antimicrobial residues.

FACT

- Our meat supply is closely monitored by the USDA (FSIS) to ensure compliance with permitted residue levels.

MISCONCEPTIONS ABOUT ANTIMICROBIAL USE IN POULTRY

MYTH

- Poultry producers can administer antibiotics purchased over the counter.

FACT

- All poultry companies' contracts strictly prohibit the use of any antimicrobial agent by contract growers.

MISCONCEPTIONS ABOUT ANTIMICROBIAL USE IN FOOD- PRODUCING ANIMALS

MYTH

- Antimicrobial use in food-producing animals is the main cause of antibiotic-resistance in human medicine.

FACT

- The estimated contribution of antibiotic use in food-producing animals to AR in humans ranges from 0.5 to 1% (RJ Bywater & MW Casewell, 2000).

MISCONCEPTIONS ABOUT ANTIMICROBIAL USE IN POULTRY

MYTH

- Use of antimicrobials for growth promotion is increasing.

FACT

- Use of antimicrobials in feed has decreased significantly over the past decade.

MISCONCEPTIONS ABOUT ANTIMICROBIAL USE IN FOOD- PRODUCING ANIMALS

MYTH

- ELDU by a veterinarian is permitted in feeds for food-producing animals.

FACT

- ELDU by a veterinarian is not permitted in feeds for food-producing animals.

MISCONCEPTIONS ABOUT ANTIMICROBIAL USE IN FOOD- PRODUCING ANIMALS

MYTH

- All antimicrobial drugs are approved for ELDU.

FACT

- Several antimicrobial drugs are explicitly excluded from ELDU.

MISCONCEPTIONS ABOUT ANTIMICROBIAL USE IN FOOD- PRODUCING ANIMALS

MYTH

- New antimicrobial drugs for treatment of food-producing animals can be purchased without a veterinary prescription.

FACT

- Since 1988 all new antimicrobial drugs for use in food-producing animals are for use only by written prescription by a licensed veterinarian.

CONCLUSIONS

- Antimicrobials are important tools to the poultry producer to prevent disease and maintain enteric health, as well as to treat disease, mitigate pain and suffering and enhance the welfare and quality of flocks raised in confinement.
- The Poultry Industry is vertically integrated controlling all aspects of the production cycle from breeders to processing plants.

CONCLUSIONS

- As such, the poultry companies own the birds and contract individual growers for raising the birds under strict guidelines and standards of care (BMPs) set by the poultry companies.
- Most companies have their own staff veterinarians specialized in poultry medicine to oversee the health of all birds raised by the growers contracted by the company.

CONCLUSIONS

- The few poultry companies that do not have their own poultry veterinarians, contract with private poultry veterinary consultants or rely on technical support from specialized poultry veterinarians working for the allied industries (primary breeders, pharmaceuticals, biologics) or University Veterinary Extension Departments.
- Poultry producers are strictly prohibited from using antimicrobials in their flocks without the company's prior knowledge and approval.

CONCLUSIONS

- Antimicrobials are only used when the poultry veterinarian deems it necessary and following the guidelines for the judicious use of antimicrobials by poultry veterinarians which have been made available to all specialized poultry veterinarians.
- Usage records indicate that the Poultry Industry is using antimicrobials in a responsible manner to protect both, poultry and human health.

THANK YOU

