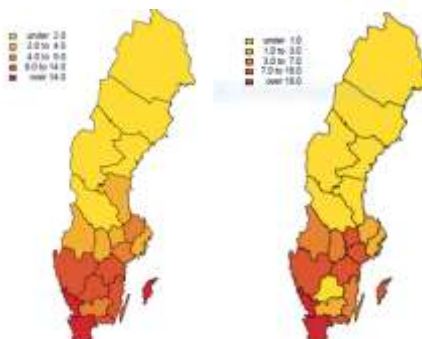


Prudent use of Antimicrobials in Sweden – Healthy Animals don't need Antimicrobials



Sweden 2016:

Human population:
Around 10 millions



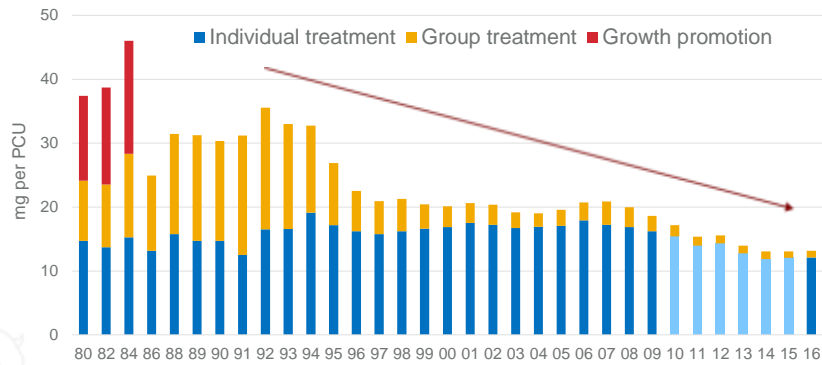
Number of dairy cows:
322 thousands
total bovines ca 1.5 millions

Number of slaughtered pigs:
2.5 millions

Number of slaughtered
chickens:
99 millions

Low use of antibiotics to animals over time

mg/population correction unit (mg/PCU)



Source: Swedres-Svarm 2016, based on raw data from the eHealth Agency .

Note: there is a lack of completeness for injectable products between 2010 and 2015, indicated by a paler colour. .

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Sales of antibiotics for food producing animals 2015 (30 countries)

Average 30 countries 141 mg/PCU, Sweden 12 mg/PCU

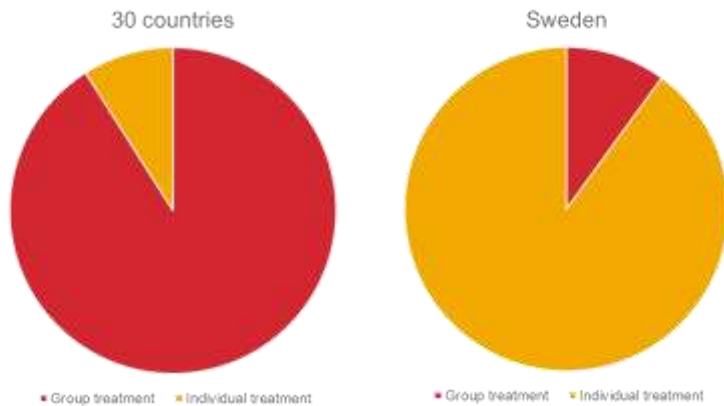
Figure 12. Spatial distribution of overall sales of all antimicrobials for food-producing animals, in mg/PCU, for 30 countries, for 2015



PCU =
population
correction
unit,
similar to
live
biomass

Source: ESVAC seventh report, 2017; www.ema.europa.eu

Type of treatment, percent of sales



Group treatment = premix, oral powder, oral solution

Source: ESVAC seventh report, 2017; www.ema.europa.eu

USE of antibiotics for broilers

Year	Treated number of flocks	Total number of flocks
2011	6	3 185
2012	1	2 853
2013	4	3 133
2014	4	3 138
2015	28	3 191
2016	14	3 300

- No quinolones, polymyxins or cephalosporins
- Phenoxymethylpenicillin dominates



Published in: Svarm 2011 & Swedres-Svarm 2012-2016

Source: Swedish poultry meat association

(only members included, representing >95% of the production)

The Swedish Strategy and overall framework

Overarching goal:

Preserve the possibility of effective treatment of bacterial infections in people and animals



Intersectoral coordinating mechanism (2012-)

- More than 20 governmental authorities
- Yearly forum during the European AMR-awareness day
- National Action plan updated 2015 and 2018-2020
- Joint communication strategy 2014.
- Recommendations how to prevent spread of MRSA from humans to animals, persons working with livestock

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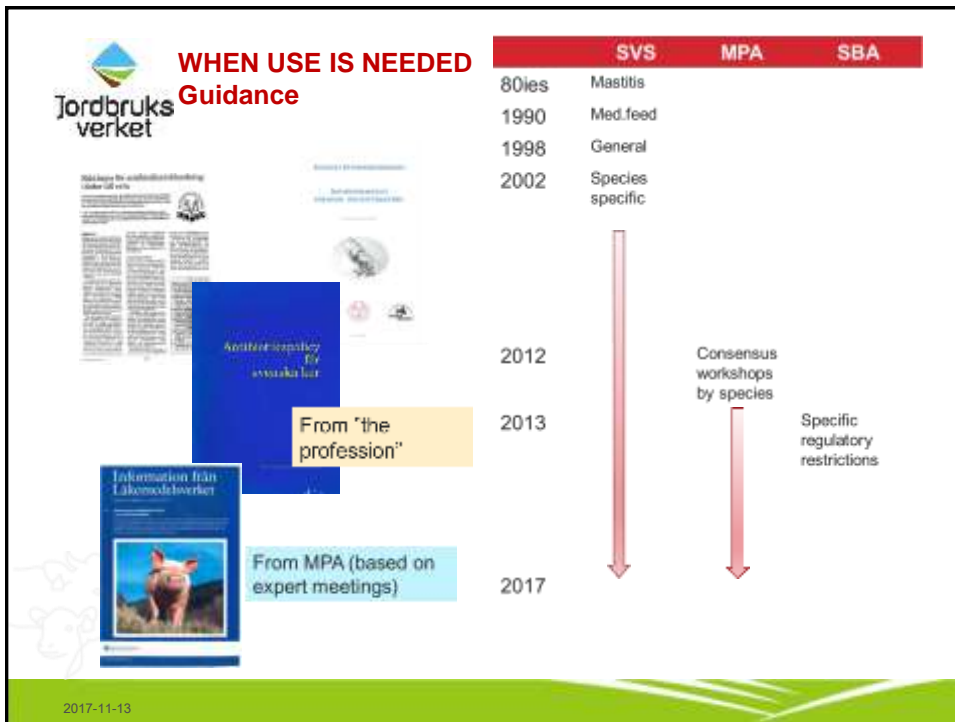
"THE SWEDISH MODEL"

AMR is not in isolation

- non use of antibiotic growth promoters
- 'prudent use' of antibiotics
- problem solving 'at the root' if possible
- internal and external biosecurity
- salmonella control
- control or eradication of several infectious diseases (PRRS, Aujeszky's disease, IBR ...)
- animal welfare
- Long tradition in Sweden of "prevention is better than cure",
- dialogue and cooperation between stakeholders and governmental authorities.



Healthy animals do not need antibiotics




Jordbruksverket
Swedish Board of Agriculture

Prohibition of antibiotics for use in animals (SJVFS 2013:42)

Some antibiotics that are approved for use in humans are not allowed to prescribe for animals:

- Carbapenems and other penems
- Ceftarolin
- Glycopeptides
- Linezolid
- Tigecycline
- Mupirocin
- And others



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The use of 3rd and 4th generation cephalosporin's and fluoroquinolones in animals (SJVFS 2013:42)



- A legal provision restricting the use of 3rd and 4th generation cephalosporin's and fluoroquinolones in animals (all species).
- Veterinarians may only prescribe these types of drugs when microbiological analysis and susceptibility testing shows that no other type of antimicrobials are effective.
- The veterinarian must justify the choice of antibiotics and document in the record.



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Infection Prevention and Control (SJVFS 2013:14)

- More strict hygiene standards for animal holders especially with production animals and for all animal facilities when receiving visitors.
- Mandatory infection prevention and control-plan for all veterinarians.
- Mandatory requirements for isolation and information of clinical cases of MRSA and MRSP in dogs, horses and cats.



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A composite strategy is needed

- Remove unnecessary use
growth promoters, routine prophylaxis
- Reduce need,
keep animals healthy
prevention and infection control
- Avoid spread
biosecurity, infection control, food hygiene
- Optimize use when needed
correct diagnosis, selection and dose
- Monitoring of resistance and use



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Healthy Animals – don't need Antimicrobials

Thank you for your
attention



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