THIS IS SVA

We are Sweden’s leading veterinary medicine laboratory.

We research and develop new methods. Our experts have unique competence and levels of excellence.

We monitor the disease situation. If something happens, we are prepared.

We share our knowledge, both within Sweden and in many other countries.

National Veterinary Institute, SVA, is a national authority in veterinary health.
Växa Sverige

Sweden’s largest advisory service company for dairy farmers

Public functions:

- Official genetic evaluation
- Cow recording scheme certified by Icar
- Control programs against infectious diseases
- Nordic cooperation in NAV and NorFor

AI Technicians  Delivery of Doses  Consultants  Out Sourcing Services  Veterinarians and specialists
Sweden, a success story
SWEDEN AND THE EUROPEAN UNION

Sweden 2015:
- Human population: ~10 million
- Dairy cows: 338 thousand
- Slaughtered pigs: 2.5 million
- Slaughtered chickens: 96 million
"THE SWEDISH MODEL"

- Animal welfare
- Control or eradication of several infectious diseases
- Cooperation and dialogue $\rightarrow$ Consensus

Don´t create systems where antibiotics is a must
# USE OF ANTIMICROBIALS FOR CHICKENS, SE

<table>
<thead>
<tr>
<th>Year</th>
<th>Flocks treated</th>
<th>Total N of flocks</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>6</td>
<td>3185</td>
</tr>
<tr>
<td>2012</td>
<td>1</td>
<td>2853</td>
</tr>
<tr>
<td>2013</td>
<td>4</td>
<td>3133</td>
</tr>
<tr>
<td>2014</td>
<td>4</td>
<td>3138</td>
</tr>
</tbody>
</table>

**Note:** Ionophores are used in almost all flocks.

Swedres-Svarm 2011-2014; based on data from the Swedish Poultry Meat Association
SALES OF ANTIMICROBIALS FOR ANIMALS, SWEDEN

Source: Swedres-Svarm 2013.
Note that from 2010 there is a lack of completeness in the data reported from pharmacies.
A COMPOSITE STRATEGY IS NEEDED

1. Remove unnecessary use
   = growth promoters, routine prophylaxis

2. Minimise need
   = keep animals healthy

3. Avoid spread
   = biosecurity, infection control, food hygiene etc.

4. Optimise use when needed
   = diagnose, correct selection & dose

5. Monitoring of use and resistance
   (Swedres/Svarm-report)
Objectives:

• Surveillance → Knowledge
• Preventive measures

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

• Supporting structures/systems
• International leadership
The golden example: Swedish dairy cows
1. REMOVE UNNECESSARY USE

Selective dry cow therapy

Photo: Ylva Persson
2-3. Minimise need and avoid spread

Freedom from BVDV, IBR, paratuberculosis, brucellosis, chlamydia, leptospiros, tuberculosis, leucosis…

Very low prevalence of salmonella

Good fertility

Low incidence of clinical mastitis

Low calf mortality
4. Optimise use when needed

- Penicillin is first choice in most cases
- Restricted use of quinolones and new generation cephalosporines
5. Monitoring of use and resistance

Treatment of mastitis with antimicrobials

- Penicillin: 89%
- Sulfonamider och trimetoprim: 8%
- Kinoloner: 2%
- Övriga: 0.4%

Treatment incidence of clinical mastitis <10%

Källa: Marie Jansson Mörk Växa Sverige 2016
CONCERNS…

The calf industry:
Young dairy calves from many different herds
Suboptimal management and poor housing

Respiratory diseases
Overuse of antimicrobials
Colostrum from cows treated with dry cow antibiotics did not affect AMR E. coli in calves. Milk from cows treated with antibiotics during lactation increased the proportion of AMR E. coli in calves.

Prudent use of antibiotics, good hygiene and a good biosecurity seem to have an impact on the prevalence and spread of AMR E. coli within and between farms.
HEALTHY ANIMALS. SAFE HUMANS.