



STRATEGIES FOR PRUDENT USE OF ANTIMICROBIALS IN SWEDEN

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THIS IS SVA

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



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.

Växa Sverige



Sweden's largest advisory service company for dairy farmers



AI Technicians



Delivery of Doses



Consultants



Out Sourcing
Services



Veterinarians and
specialists

Public functions:

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

The background of the slide is the flag of Sweden, which consists of a blue field with a yellow Scandinavian cross. The cross is composed of a vertical bar and a horizontal bar that intersect in the center. The text "Sweden, a success story" is centered on the horizontal bar of the cross.

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

Don't create systems where antibiotics is a must

- ~~Antibiotic growth promoters~~ and prudent use of antimicrobials for treatment.
- Cooperation and dialogue → Consensus



USE OF ANTIMICROBIALS FOR CHICKENS, SE

Year	Flocks treated	Total N of flocks
2011	6	3185
2012	1	2853
2013	4	3133
2014	4	3138

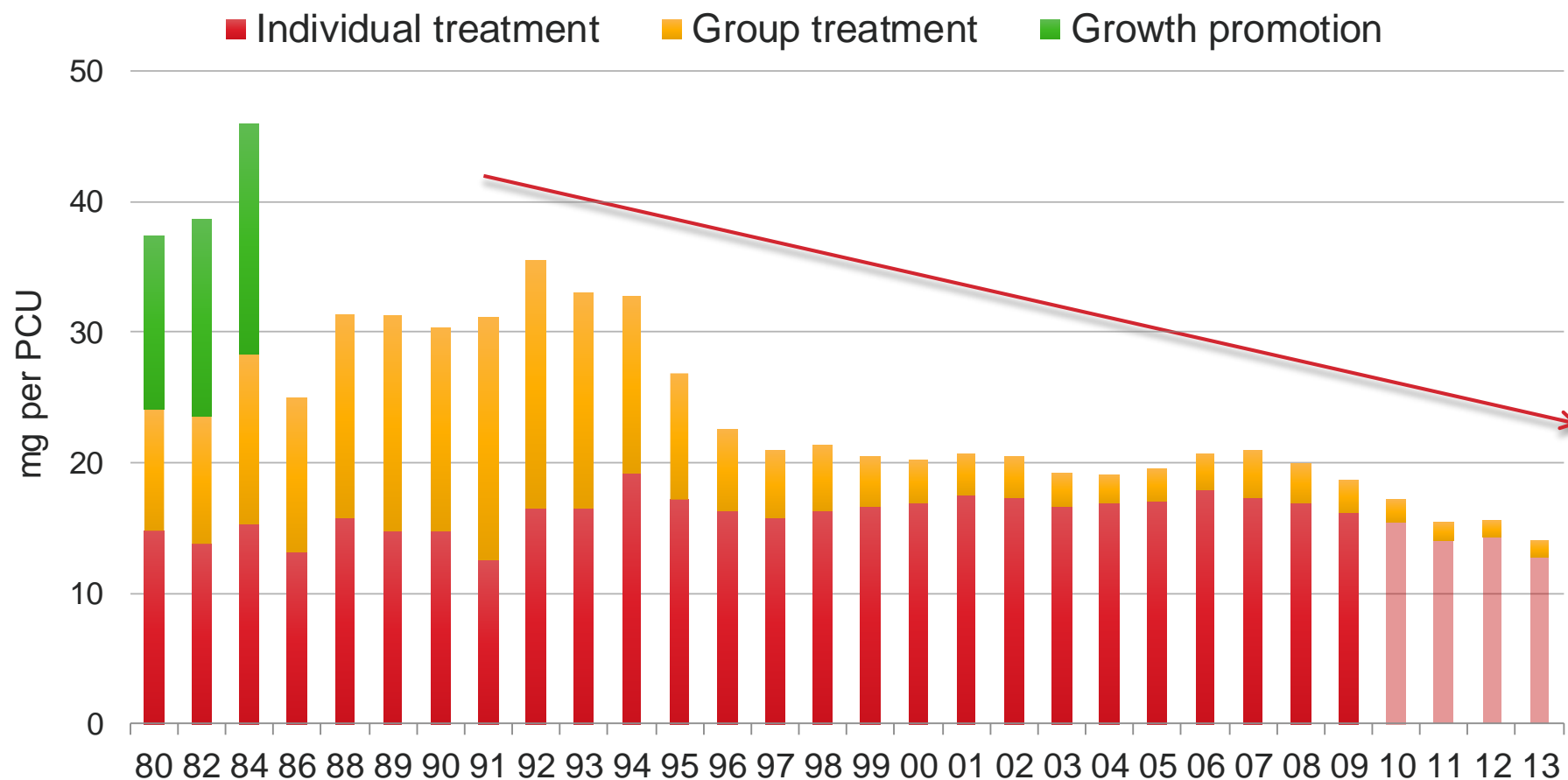
Note:

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)



Swedish strategy to combat
antibiotic resistance

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

Photo: Åsa Lundgren. Växa Sverige



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 från 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

**SVERIGES VETERINÄRMEDICINSKA SÄLLSKAPS
RIKTLINJER FÖR ANTIBIOTIKAANVÄNDNING TILL
NÖTKREATUR OCH GRIS**



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

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ISSN 1102-0970



**Föreskrifter om ändring i Statens jordbruksverks
föreskrifter (SJVFS 2013:42) om läkemedel och
läkemedelsanvändning;**

**SJVFS 2015:32
Saknr D 9**
Utkom från trycket
den 1 oktober 2015
Omtryck

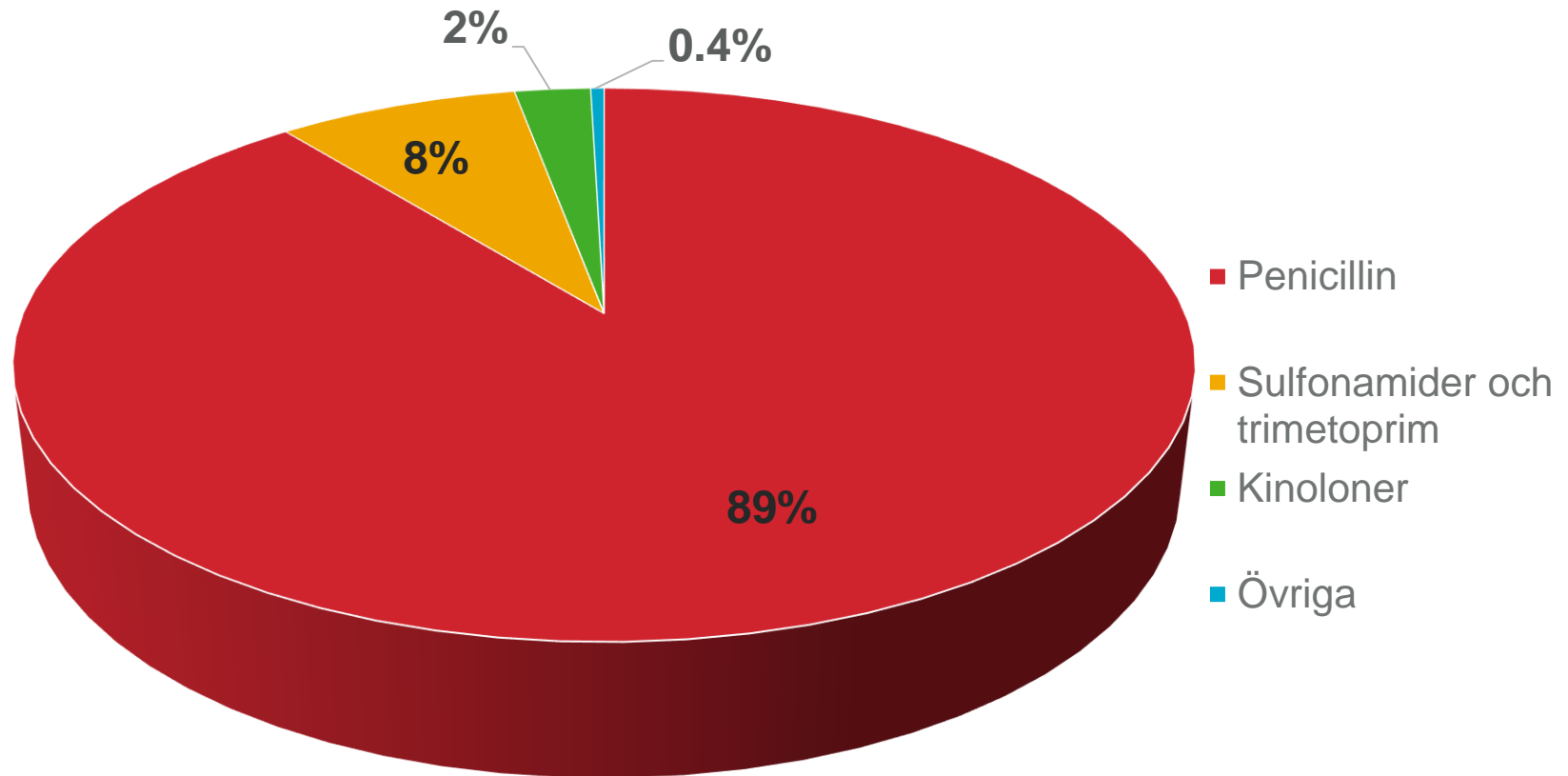
beslutade den 30 september 2015.

Statens jordbruksverk föreskriver, med stöd av 2 kap. 2 § förordningen (2009:1386) om verksamhet inom djurens hälso- och sjukvård, i fråga om verkets föreskrifter (SJVFS 2013:42) om läkemedel och läkemedelsanvändning

dels att rubriken närmast före 4 kap. 2 § ska utgå,
dels att nuvarande bilaga ska betecknas bilaga 1,
dels att 1 kap. 1 §, 2 kap. 5, 6 och 22 §§, 3 kap. 5, 7–9 a, 18 och 20 §§, 4 kap. 1–9 §§ samt rubriken närmast före 2 kap. 22 § ska ha följande lydelse,
dels att rubrikerna närmast före 4 kap. 5 och 6 §§ ska sättas närmast före 4 kap. 9 och 10 §§,
dels att det i föreskrifterna ska införas sju nya paragrafer, 3 kap. 9 a § och 4 kap. 10–15 §§, två nya bilagor, bilaga 2 och 3, samt närmast före 4 kap. 4, 6 och 8 §§ nya rubriker av följande lydelse.

5. Monitoring of use and resistance

Treatment of mastitis with antimicrobials



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



Important h

Colostrum
antibiotics
calves.

Milk from
during la
AMR *E. coli*

Prudent u
a good
impact on
AMR *E. coli*

ACTA UNIVERSITATIS AGRICULTURAE SUECIAE



DOCTORAL THESIS NO. 2015:47
FACULTY OF VETERINARY MEDICINE AND ANIMAL SCIENCE

Antimicrobial Resistant *Escherichia coli*
in Faeces from Preweaned Dairy
Calves

Prevalence, Risk Factors, and Spread

ANNA DUSE



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**HEALTHY
ANIMALS.
SAFE
HUMANS.**