



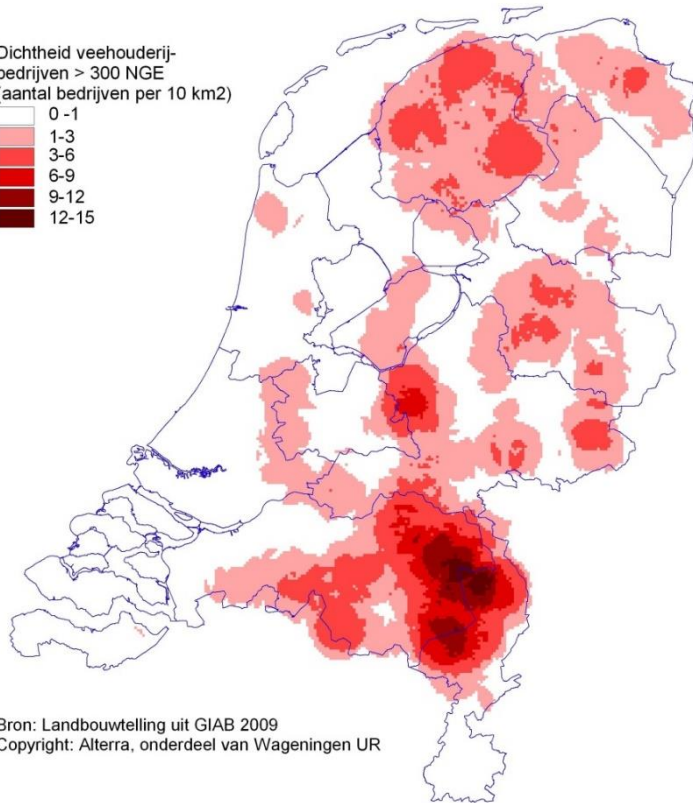
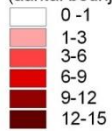
Ministerie van Landbouw,
Natuur en Voedselkwaliteit



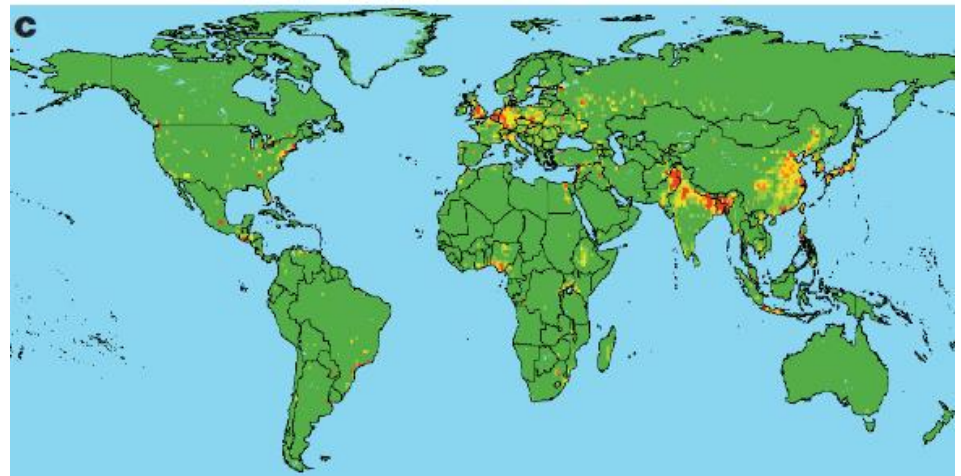
Reduced and responsible use of antibiotics in food-producing animals in The Netherlands



Dichtheid veehouderij-
bedrijven > 300 NGE
(aantal bedrijven per 10 km²)



Bron: Landbouwtelling uit GIAB 2009
Copyright: Alterra, onderdeel van Wageningen UR



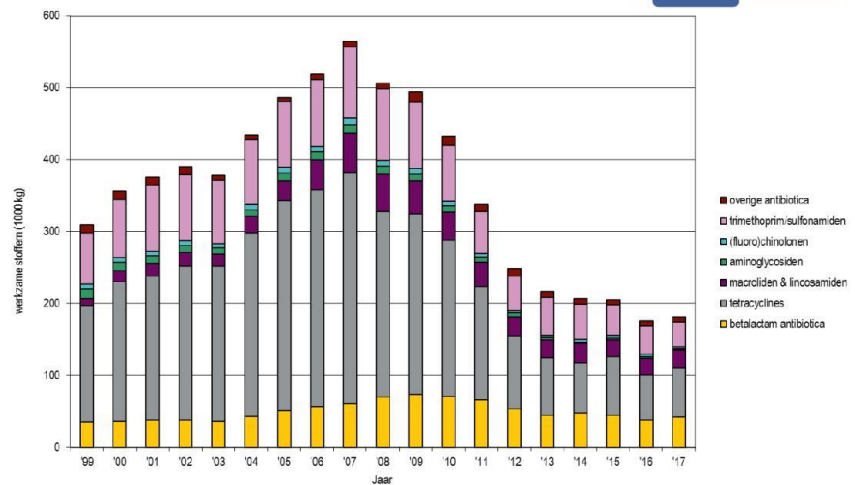
Global distribution of relative risk of an EID event
Global Trends in Emerging Infectious Diseases; Kate E. Jones et al. *NATURE*; Vol 451|21 February 2008



Key elements of reduction policy since 2009

- > Self-regulation
- > Transparency
- > Benchmarking
- > Mandatory health and treatment plans
- > Veterinary guidelines
- > Private quality schemes
- > Reduction targets

Figuur 3. Verloop van de verkoopcijfers van antimicrobiële middelen, uitgedrukt in aantal kilogrammen actieve stoffen (x 1.000) van 1999 tot en met 2017 (bron FIDIN) naar hoofdcategorie





Key elements of reduction policy 2.0

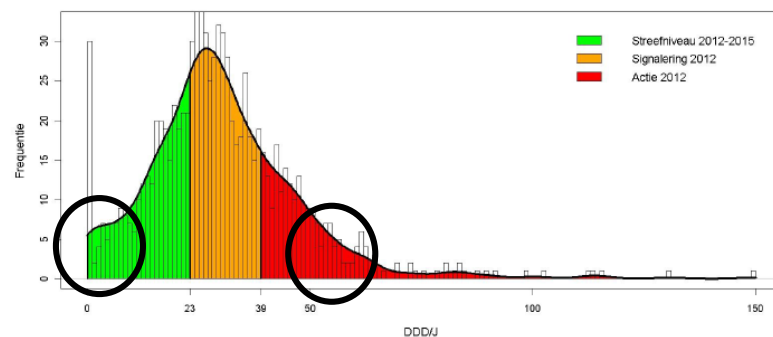
- › Sector specific reduction actions
- › Research on critical success factors correlated with use of antibiotics
- › Implementation of the results in different sectors
- › Reduction target: -70%

What are critical success factors?



Research on critical success factors: methods

- > Data collection of antibiotic use on farms with low and high use
- > Sectors: veal calf, pig, poultry



- > Statistical analyses were performed on possible associations between farm-characteristics, e.g.:
 - farm type
 - farm size
 - farm management
 - animal health



Critical success factors: general results

- › The results of the critical success factors are associations, and not all are causal.
- › In all sectors are clear leads to decrease the usage.
- › Further analysis on the associations is needed to define possible causalities.



Results veal calf sector

- › Small farms often have a lower usage
- › Usage depends on management factors

- › **Higher usage:**
 - Number of staff lower
 - More nationalities
 - Only Dutch calves
 - Higher number of bull calves
 - Lower start weight
 - Autumn and winter
 - Salmonella infections





Results veal calf sector (2)

- › Usage depends on social factors
- › **Higher usage:**
 - Less trust in veterinarian
 - Feeding specialist plays bigger role
 - Perception of health of calves is lower
 - That do not feel social pressure





Results veal calf sector (3)

- › Usage depends on other unexplained factors
- › **Higher usage:**
 - Longer empty period
 - More separate buildings





Results pig sector

- › small farms often have a lower usage
- › Usage depends on management factors e.g.
 - Less vaccinations give lower usage
 - Sows: Higher usage when fattening pigs stay on farm
 - Fattening pigs: Lower usage when coming from closed farm
- › more piglets per sow increases the usage





Results poultry sector

- › Large farms often have a lower usage
- › Slower growing breeds use less antibiotics
- › Thinning flocks increases the usage





Veterinarians

- › Research critical success factors of low and high prescribers
- › VETMAP project: develop a system to representatively monitor AMR of specific poultry, swine and cattle pathogens
- › Use data to update formularia with first, second and third choice
- › Further step towards prudent use



Conclusions

- Current reduction is nearly 64%.
- We still have a target of 70% reduction.
- Sector specific reduction targets should lead to this 70% reduction.
- Especially in the veal calf sector there a useful outcomes to lower the usage.
- Implementation of critical success factors will help to reach our targets.