Measuring global animal health in Belgium: development of an animal health barometer.

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Introduction

•To measure the safety of the food chain 3 barometers were developed by the Scientific Committee of the Belgian Food Safety Agency: the food safety barometer (advice Sci Com 28/2010), the animal health barometer (advice Sci Com 09/2011) and the plant health barometer – phytosanitary situation (advice Sci Com 10/2011).

•These instruments provide a bird's eye view on the overall status of the safety of the food chain in Belgium in accordance with the competencies of the FASFC.

Objective: to measure the yearly evolution of general animal health in Belgium in an objective manner and to communicate about it a comprehensive way.

Material and Methods

• The animal health barometer consists of a basket of 13 carefully chosen, measurable animal health **indicators** (AHI) which together reflect the animal health situation. The results were monitored between 2007 and 2011.

•These AHI include all links of the animal production chain, i.e. from suppliers to slaughterhouses and fish markets, for both the Belgian production and for imports. The control of products (analyses) and organs, as well as controls of processes (inspections and audits) are both included in the basket. The preventive approach (self-checking, compulsory notification, traceability) and yearly mortality numbers for certain animal species are also covered.

•The majority of these indicators are measured within the context of the control program of the FASFC. Some data originate from sources external to the FASFC.

•The relative importance of the indicators in the barometer was weighted by the various stakeholders of the food chain.

•Based on the results of the animal health indicators and the weighting of the relative importance of these indicators an animal health barometer was defined. This barometer measures the state of the general health of production animals in Belgium on an annual basis, and this in relation to the previous year. The result of the barometer is expressed as a comparison with the state of a previous year as it is difficult to express animal health in absolute figures.

Ref.	Type of indicator	Weighting factor
AHI1	The mandatory reporting of notifiable animal diseases	1,87
AHI2	Self-checking for the primary animal production sector	1,11
AHI3	Inspections of infrastructure, facilities and hygiene	1,57
AHI4	Traceability inspections	1,19
AHI5	Animal welfare inspections	0,61
AHI6	The mandatory reporting of bovine abortions	1,22
AHI7	Number of somatic cells in milk	0,80
AHI8	Parasitic liver damage in pigs	0,42
AHI9	Antibiotic resistance in *E. coli* indicator bacteria	1,49
AHI10	Mortality in slaughter pigs	0,84
AHI11	Mortality of small ruminants	0,54
AHI12	Poultry carcasses declared non-compliant	0,65
AHI13	Mortality of veal calves	0,69

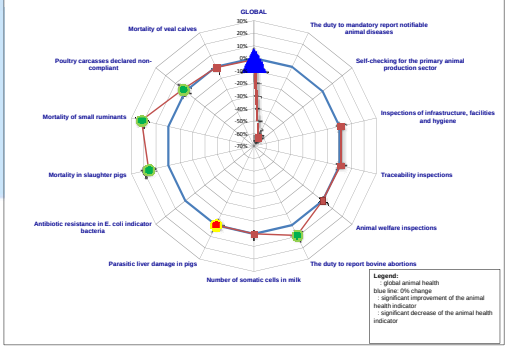
Table 1: Overview of the animal health indicators (AHI) and their weight in the barometer

Results

Animal health barometer 2007-2008: -1,1%

Despite a clear improvement with regard to mortality (especially in small ruminants) after the bluetongue epidemic in 2007, this slight decrease was mainly due to an impaired vigilance with regard to mandatory notifiable diseases.

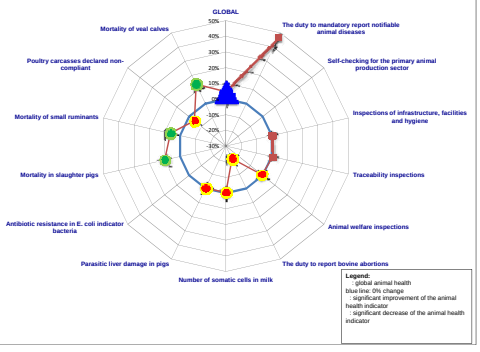
Visual representation of the animal health barometer evolution over the years 2007-2008 (schale -70% up to +30%)



Animal health barometer 2008-2009: +4,7%

The increase was mainly due to an improved vigilance with regard to mandatory notifiable diseases and a decrease of mortality in slaughter pigs, small ruminants and veal calves. On the other hand, there was a clear decrease with regard to vigilance for bovine abortions.

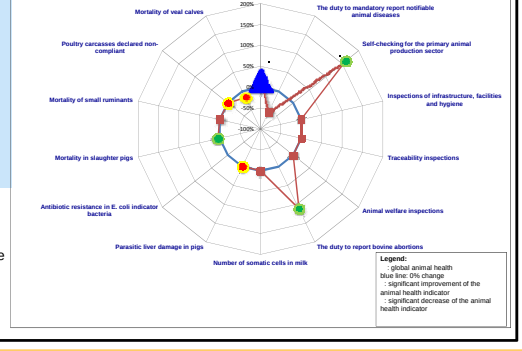
Visual representation of the animal health barometer evolution over the years 2008-2009 (schale -30% up to +50%)



Animal health barometer 2009-2010: +16,7%

This increase was mainly due to an increase in the number of farms which have a validated self-checking system. Furthermore there was an improved vigilance for bovine abortions due to an encouragement policy by the FASFC.

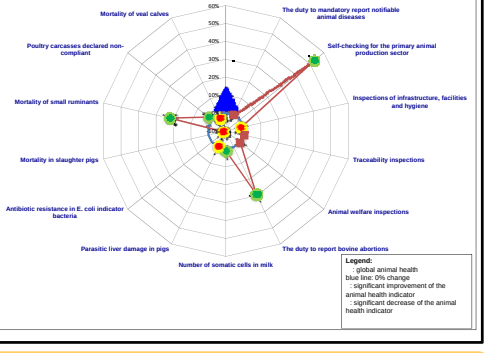
Visual representation of the animal health barometer evolution over the years 2009-2010 (schale -100% up to +200%)



Animal health barometer 2010-2011: +8,0%

As in previous years there was an increase in the number of farms with a validated self-checking system and an increased vigilance with regard to bovine abortions. Furthermore there was a significant decrease of mortality in small ruminants compared to 2010.

Visual represenation of the animal healt barometer evolution over the years 2010-2011 (schale -10% up to +60%)



Discussion and conclusions

•The animal health barometer provides a general image of the animal health of livestock in Belgium on a yearly basis and this compared to the situation of a previous year.

•It is a unique instrument to yearly communicate on global animal health in Belgium.

•Based on 13 animal health indicators, it has been found that animal health in Belgium shows a positive evolution since 2007, the real meaning of which must be assessed over the long term.

•Each indicator has its respective strengths and weaknesses and the whole set of indicators is representative for animal health in Belgium and incorporates various aspects of the food chain.

For further information please visit http://www.favv-afsca.fgov.be/scientificcommittee/barometer/