Online check of farm-level risk factors for Avian Influenza infection

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Intro to Good Practice

Highly pathogenic avian influenza (HPAI) has been a global problem for wild birds and poultry production for years. Originally, HPAI was a seasonal phenomenon, but the virus now occurs year-round in several regions of the world.

As a result, the virus can be introduced into poultry flocks via a variety of pathways. The most common transmission route is the human carrying the pathogen onto farms.

Total result
According to the evaluation of your questionnaire, your company is in risk class 2.

Risk class 3	< 33% high risk
Risk class 2	33% - 66% middle risk
Risk class 1	> 66% less risk

Example how the results looks like.

Background & challenges

HPAI is highly infectious, causes severe general signs of disease and leads to high mortality rates, so that an infected flock must be completely culled. Increasing biosecurity at farm level can reduce the risk of HPAI being introduced.

An online tool has been developed in Germany for broiler farmers, herd veterinarians and advisors to enable individual assessment of farm and pathogen-specific biosecurity concepts.

The risk traffic light

- Systematic, individual identification of risk factors for HPAI entry at farm level
- Voluntary, anonymous and free of charge, no official requirement
- Scientifically based, developed in a participatory manner
- Weighting of risk factors according to their epidemiological relevance, derived from a three-stage Delphi study with an expert panel
- Tool contains about 100 questions; takes about one hour to answer
- Immediate output of the results:
1. List of risk factors and the general status of biosecurity in the form of a traffic light (red, yellow, green)
2. Optimization analysis/recommendations for improvement
3. Task list for livestock farming operations

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Additional information

- This risk traffic light system for HPAI has been launched in 2018.
- Under the coordination of the University of Vechta, a team of experts from the Friedrich-Loeffler-Institut, Lower Saxony Poultry Association, Central Association of the German Poultry Industry and QS quality seal program developed the instrument.
- The traffic light tool only considers closed barns without winter gardens or free range areas.
- Evaluations have shown that farmers, veterinarians and consultants see a high risk in the following areas:
  - Staff discipline in daily hygiene management
  - Language barriers
  - Pre-catching/ Handling of fallen animals

Ihr Ergebnis der Risikoeinschätzung

	Max. erreichbare Punkte	Erreichte Punkte	Anteil erreichter Punkte in Unterkategorie in %
🟡 Sicherung des Betriebes	128.9	80.2	62.2%
🔴 Betriebslage - Eintrag aus dem Wildvogelbereich	45.6	7.3	16%
🟢 Betriebsorganisation	43.3	41.3	95.4%
🟢 Schwarz-Bereich (Betriebsgelände)	39.9	31.5	79%
🟡 Sicherung des Stalles	56.4	23	40.8%
🟡 Schwarz-Weiß-Grenze	56.4	23	40.8%
🟡 Arbeitsabläufe	71.5	40.4	56.4%
🟡 Management des Betriebsalltags	52.1	22.8	43.7%
🟢 Hygienevorsorge	19.4	17.6	90.5%

Example showing the outcome of the tool indicating the score for the various aspects

Potential farm-level risk factors are inspected and scored

Benefits

- Insight into the operational risk of an introduction of avian influenza
- Clear recommendations for optimizing individual farm biosecurity
- can be used for training courses
- The tool is free of charge, repeatable and has no time restrictions
- Prevention takes time but leads to better protection in the future
- Available in German, English, French, Polish.
- Data is stored anonymously and processed to improve the traffic light risk analysis.
- Adaption on AHL (European Animal Health Law)

The tool was developed to minimize the risk of HPAI but cannot guarantee the occurrence of the disease.

This online risk assessment tool (www.risikoampel.uni-vechta.de) was awarded as BroilerNet Champion of Good Practices regarding the theme Animal Health.

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