International Poultry Production

Poultryhealth BYTES

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Toxicities & chemical health hazards II

Risk analysis

Risk analysis in a food context is a concept which ensures that decisions are evidence-based and transparent so that they will allow decision makers to choose between different options in any given situation. Risk analysis represents a set of rational and probability-based methods applicable to situations where a decision is based on limited information.

Risk analysis has three components:

- Risk assessment
- Risk management
- Risk communication

Risk assessment includes the following parts:

- **Hazard identification** by which a particular factor (a hazard, such as a biological or chemical feed contaminant) is identified as possibly relevant for further analysis.

- **Hazard characterisation** by which the adverse effects of the previously identified factor are specified and their dose-dependent severity and magnitude are quantitatively determined.

- **Exposure assessment** by which their level of exposure is estimated in a particular area, for example, North America, for either the population as a whole or as specified subgroups.

- **Risk characterisation** or the probability based calculation (quantitative risk assessment) or estimation (qualitative risk assessment) of the resulting health risk integrating hazard and exposure data.

The fundamental principles allowing substantiation of the outcome of risk assessment are that the risk assessment should be:

Science based

Well documented

Objective

Repeatable

Transparent