Efficiency of different on-farm biosecurity measures in Switzerland

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On-farm biosecurity is a collective term for all measures implemented on farms to reduce the risk of introduction and spread of infectious agents. The European Union currently discusses the replacement of the existing system (a combination of national and on-farm biosecurity measures) for maintaining a good animal health status, by an on-farm biosecurity concept only. This will be a challenge for Switzerland, as the currently very high standard of animal health is mainly achieved through national measures such as import restrictions. Thus, this project aims to assess the efficiency of various on-farm biosecurity measures in Swiss livestock. Due to sparse scientific data on the efficiency of individual biosecurity measures, the required knowledge will be extracted by means of an expert elicitation using a modified Delphi method. Through one-on-one interviews, Swiss and international experts will be asked to give their opinion on the effectiveness and importance of various biosecurity measures. Following the completion of all interviews, experts will be given the opportunity to reevaluate their answers as compared to the response of the group. Based on these results, a model will be created, allowing us to estimate the degree of protection following the implementation of biosecurity measures. Through a risk assessment for selected diseases we intend to evaluate the probability of disease introduction under different combinations of biosecurity measures. These results will be used to elaborate recommendations for biosecurity measures that can be implemented under Swiss animal husbandry conditions, while ensuring a good health status of livestock.