

P25 - Infectivity of African swine fever virus after drying and heat inactivation on crops

Melina Fischer¹, Maarten Mohnke², Jutta Pikalo¹, Carolina Probst¹, Martin Beer¹, Sandra Blome¹

¹ Friedrich-Loeffler-Institut, Greifswald-Insel Riems, Germany

² Ludwig-Maximilians-Universität, München, Germany

African swine fever (ASF), a viral disease that can cause a hemorrhagic fever like illness with exceptionally high lethality in pigs, has now conquered three continents and is threatening to spread further. Despite its limited host range, and non-existent zoonotic potential, its socio-economic impact is extremely high and many stakeholders are involved. Recently, the role of feed, water, and bedding has been discussed for disease transmission and it was demonstrated that infection can be induced under certain circumstances by liquids or contaminated feed.

To mitigate the risk of disease introduction by these routes, heat treatment of source materials could be an option. Here, we tested the effect of moderate heat on the survival/inactivation of ASF virus (ASFV) contaminating different crops.

In detail, 20g of wheat, barley, rye, triticale, corn and pea were contaminated with 900µl of infectious blood with a titer of 10⁶ HAD₅₀/ml. After 2h of drying at room temperature, mimicking a transport process, samples were incubated 1h at different temperatures between 40°C and 75°C for heat inactivation. Crop samples were washed with 5ml of cell culture medium by shaking and vortexing. The washing solution was analysed by real-time PCR and haemadsorption test.

First results indicated that while viral genome was detected in all contaminated samples, no viable virus could be recovered already after drying for 2h at room temperature. Possible reasons are under investigation therefore additional tests with protein-stabilized virus will be conducted.

Contact: [Melina Fischer](mailto:Melina.Fischer@fli.de)
Melina.Fischer@fli.de

