

Gene editing could yield swine flu-resistant pigs, cutting the risk of another pandemic

[Swine flu] was transmitted to humans across the world in the 2009 pandemic and led to pig industry costs of around US\$1 billion. It causes respiratory illness, fever, loss of appetite and impacts on productivity.

But new gene-editing tools could complement current strategies for controlling swine flu, researchers concluded in a newly published review study.

The scientists said gene-editing technologies could be used to precisely alter genes in pigs that flu viruses use to establish infection, as had been done to tackle other viruses affecting pigs.

The technology could also be applied in vaccine production systems to reduce manufacturing costs, which would likely improve efficacy by increasing uptake.

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Swine flu vaccines, which have become more widely used with increasing pig production, reduce the overall disease burden but may not be effective when the virus mutates.

Hamish Salvesen, of the Roslin Institute, said swine flu caused significant economic burden on farmers and was a real threat to human health.

"If gene-editing tools are approved by regulatory bodies and society, they could bring real benefit in complementing existing measures to prevent infection on farms across the world."

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