

AGRESEARCH

Spatial layer of Facial eczema risks in New Zealand under changing climates

HOW TO USE THIS INFORMATION

Facial eczema is the result of ingestion of toxic spores from the fungus *Pseudopithomyces chartarum*.

The spatial layers contain estimates of climatic suitability for sporulation of *Pseudopithomyces chartarum* at 0.05 degree resolution under historical and future climates assuming that the fungus is present or enters into the environment.

Climate suitability was calculated as the normalised product of a temperature index and a rainfall index based on using published descriptions of the response of *P. chartarum* to temperature and moisture.

The spatial layers are either historical results which are annual from 2008 to 2021 or future predictions for each decade from 2030 to 2120 and are based on HADGEM2 using emissions scenarios RCP2.6 or RCP8.5.

Suitability within the spatial layers is presented as a normalised value between zero and one.

The data provides pastoral farmers and rural professionals with information to guide initial conversations on the potential risk of FE within geographical areas in New Zealand into the future.

This information may be used to guide land use decisions, or to allow medium-term planning as to grazing systems that minimise the impact of FE, or long-term planning as to establishing breeding programmes towards animals that are genetically tolerant to the toxin.

[PHILLIPS C, JOHNSON PL, TOMASETTO F, MCRAE K, VAN DER WEERDEN T. 2023. Predicting facial eczema risks in New Zealand under changing climates. J. New Zeal. Grasslands 85: 61-71.](#)