



Food and Agriculture
Organization of the
United Nations



International
Plant Protection
Convention



Department
for Environment
Food & Rural Affairs

Plant Health and Climate Change

London, 21 – 23 September 2022

International Plant Health Conference



USDA APHS Plant Protection and Quarantine Climate Change Response



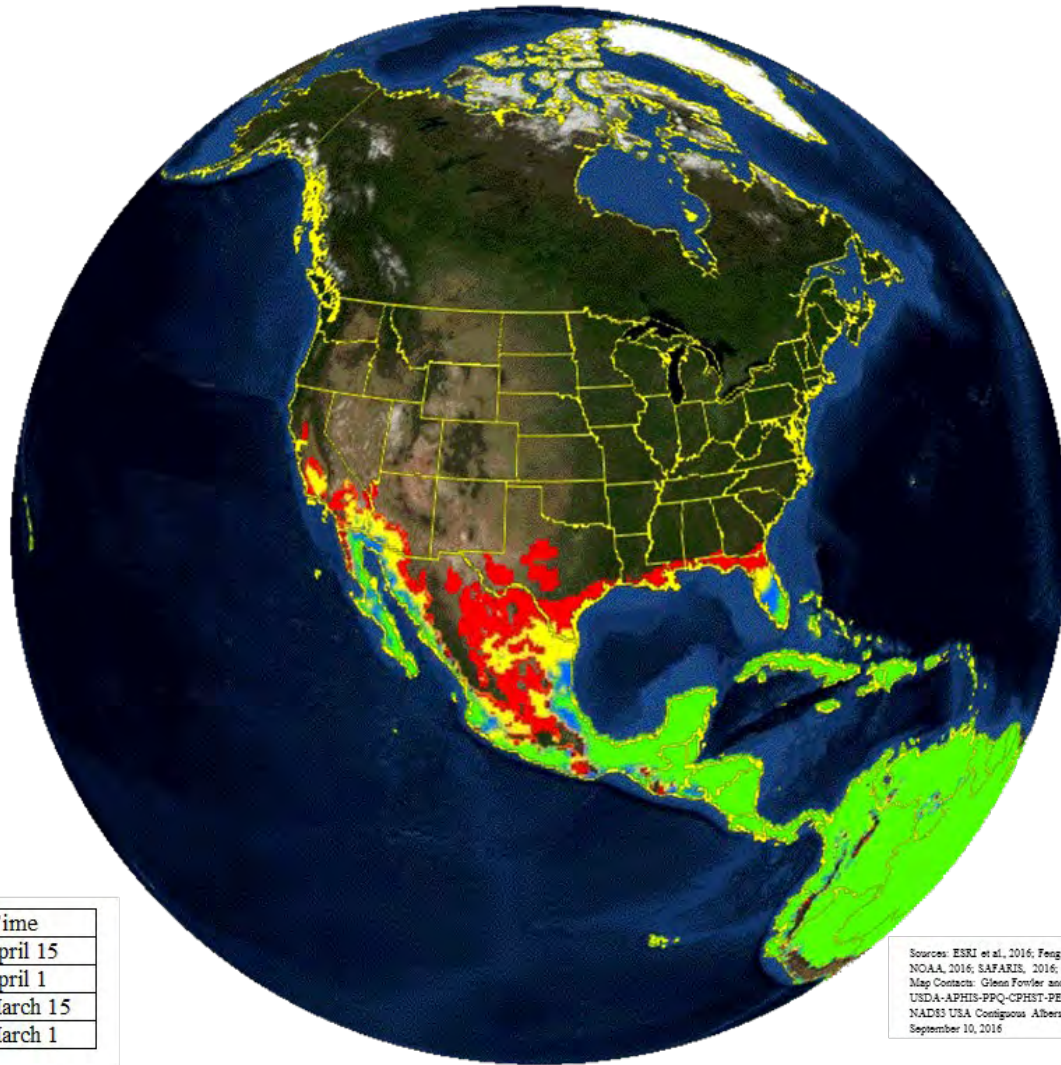
USDA APHIS PPQ, USDA APHIS PPQ, Bugwood.org

UGA1265007

Climate Change Effects on Plant Pests



Better Pest Forecasting to Address Changes in Pest Risk



Sources: ESRI et al. 2016; Feng et al. 2010;
NOAA 2016; SAFARI, 2016; TopoNY, 2016
Map Contacts: Glenn Forrier and Yo Tabacchi
USDA-APHIS-PPQ-CPHST-PERAL-NCSU-CIPM
NADES USA Contiguous. Albers Equal Area Conic
September 10, 2016

Helicoverpa armigera

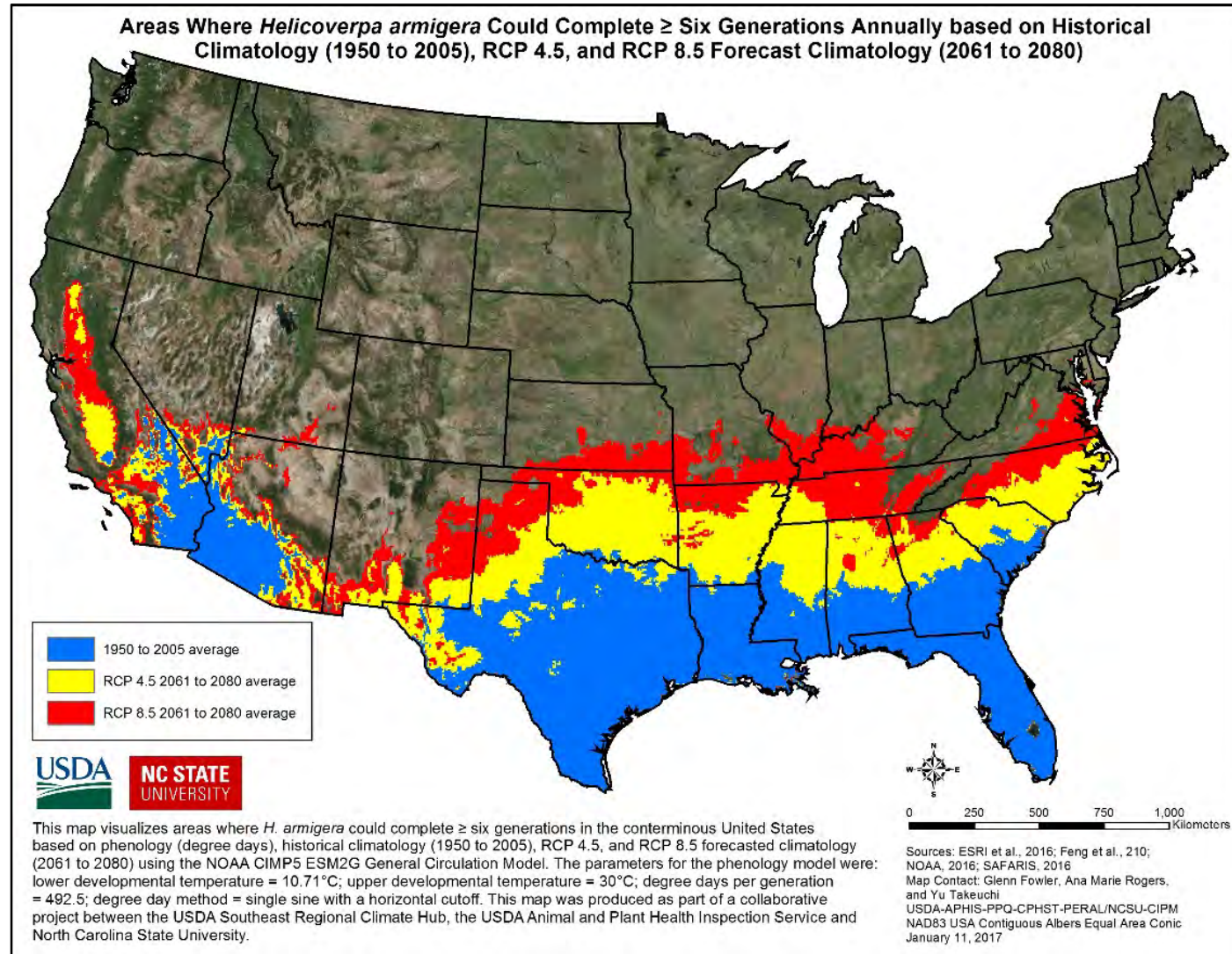
Gyorgy Csoka, Hungary Forest Research Institute, Bugwood.org

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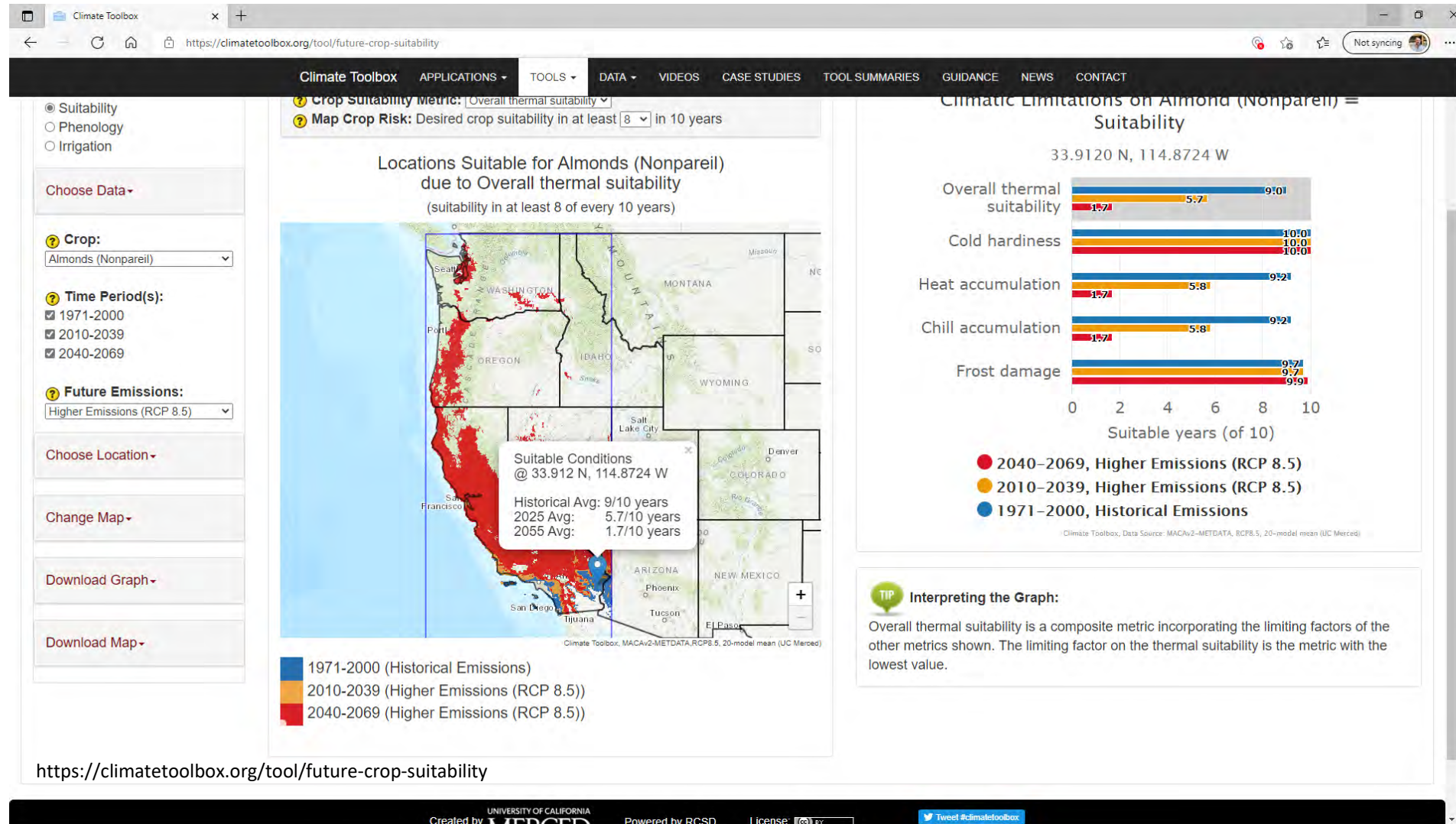
Spatial Analytic Framework for Advanced Risk Information Systems (SAFARIS)



Climate Change Forecasts



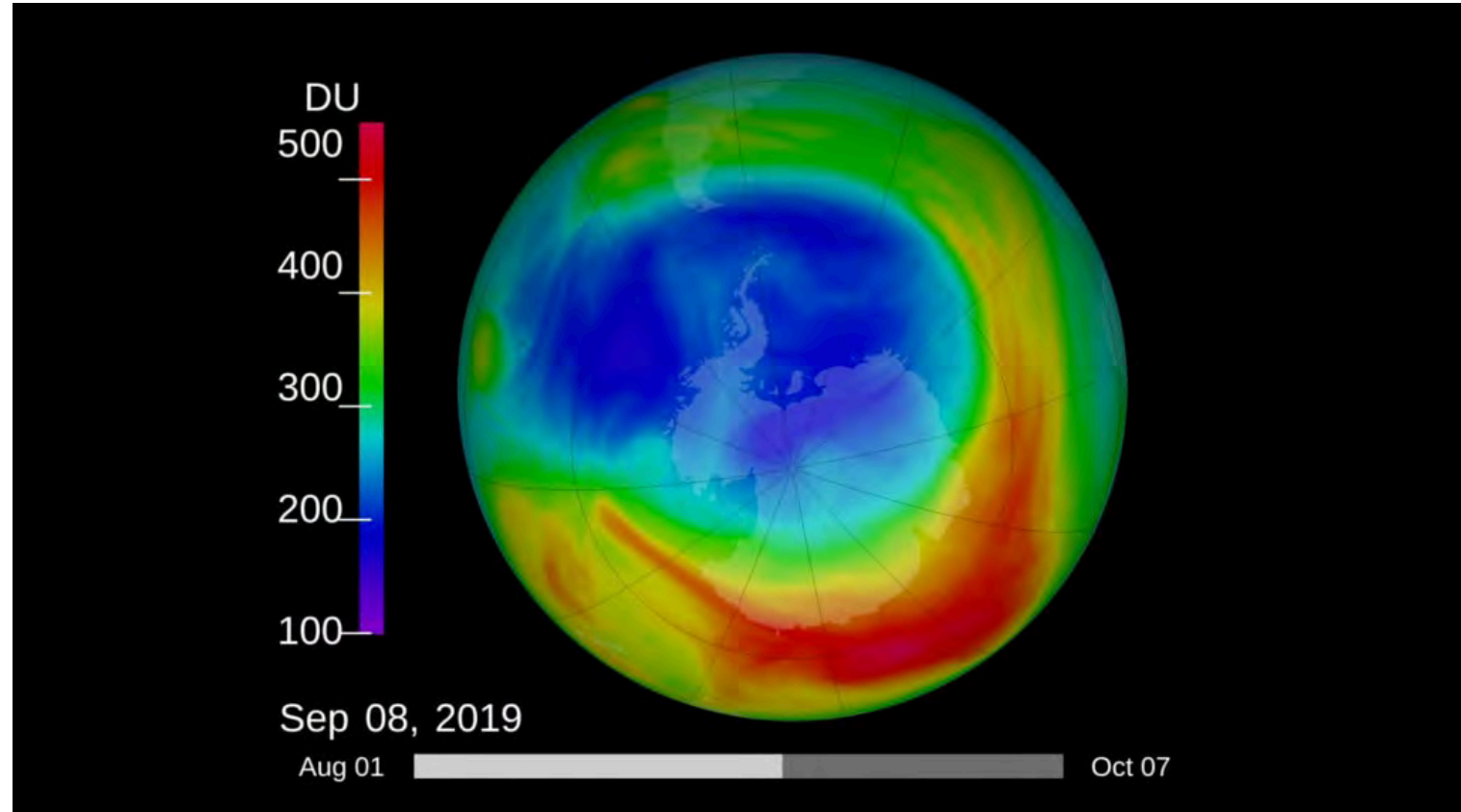
Potential Climate Change Forecasts Applications



Working to Reduce Methyl Bromide Use with Climate Friendly Alternatives



Scott Myers, Forest Pest Methods Laboratory



The 2019 ozone hole reached a peak extent of 6.3 million square miles on Sept. 8, 2019, the lowest maximum observed in 40 years of record. This NASA visualization depicts ozone concentrations on Sept. 8 in Dobson Units, the standard measure for stratospheric ozone. Credit: Katy Mersmann/NASA Goddard

Vacuum Steam Treatment of Hardwoods



Source: Mack (2021)

Phytosanitary Irradiation



Small canister X-ray irradiator Sources: Jeffers (2021a,b, 2022)



UGA1322040

Scott Bauer, USDA Agricultural Research Service,
Bugwood.org

Reducing Unnecessary Treatments with Molecular Diagnostics



Sources: Ruiz-Arce and
Farris (2021), Farris (2021)

Real-Time PCR Detection System

Reducing Unnecessary Treatments with Risk Analysis



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Communication and Collaboration



International Efforts



Summary and Conclusions



Acknowledgements

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Thank you

Glenn Fowler
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