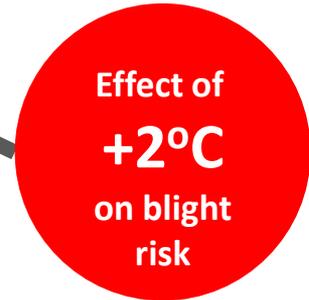


A landscape photograph of a field, likely a potato field, with a teal overlay. The sun is visible in the upper left corner, creating a bright glow. The field is filled with rows of plants, and the background shows a line of trees and a clear sky.

Analysis of historical climate data for Ireland and its impact on Late Blight of potatoes

Joan de Lacey, Eoin Lettice

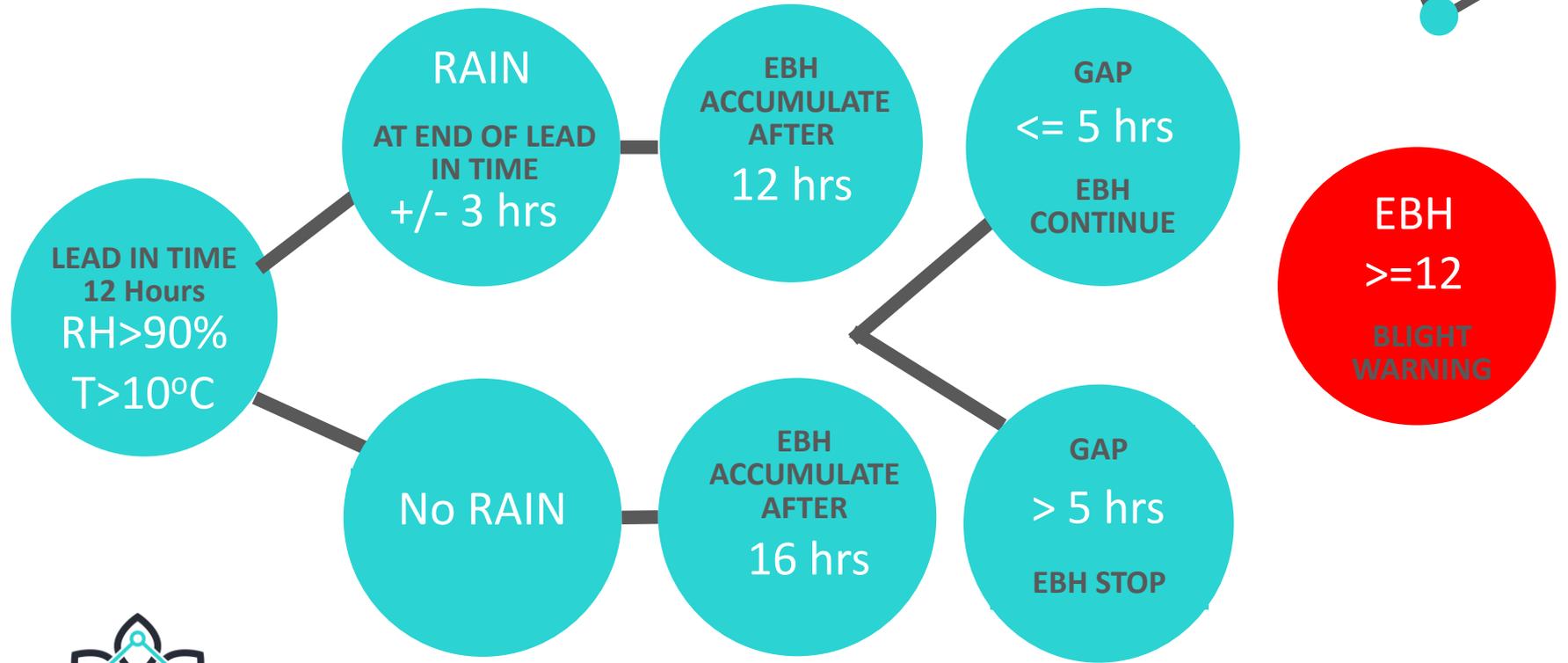
Potato Late Blight



4th Crop Worldwide
Acreage increasing

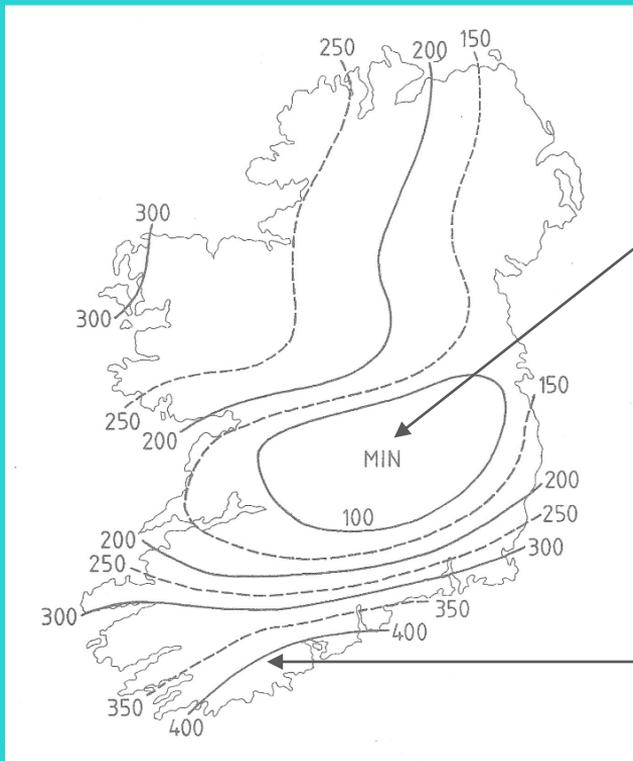
... threat to global food security.

Bourke's Irish Rules (revised)



Effective Blight Hours 1957 – 1981 (Keane, 1981)

Annual blight risk
Low risk – Midlands
High risk - South Coast



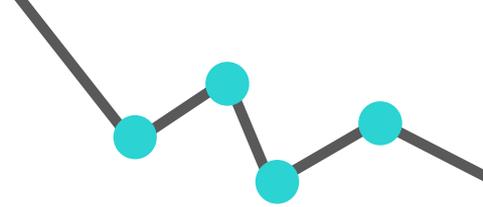
Spray to Blight Warning

Spray to calendar

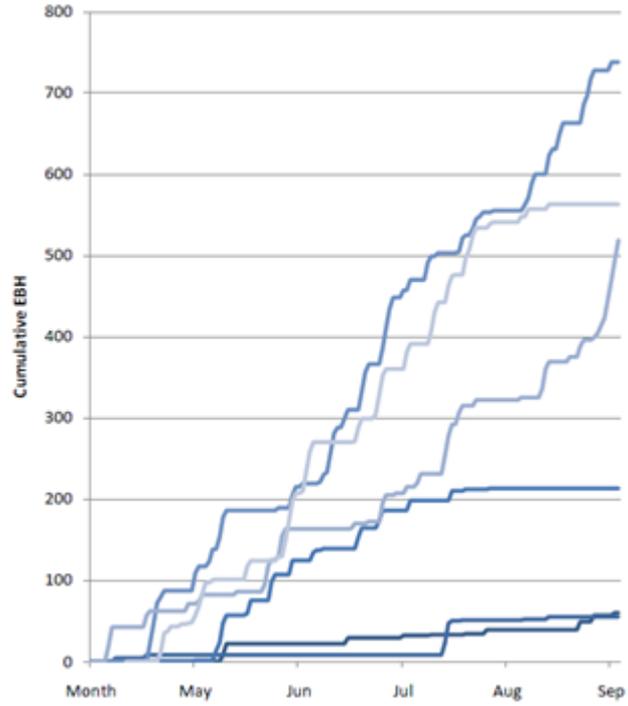


BLIGHTLINK

Accumulated Effective Blight Hours 2010 – 2012 (de Lacey, 2014)



- 2010 Belfast
- 2011 Belfast
- 2012 Belfast
- 2010 Sherkin
- 2011 Sherkin
- 2012 Sherkin



Sherkin Island, West Cork

Newforge, Belfast



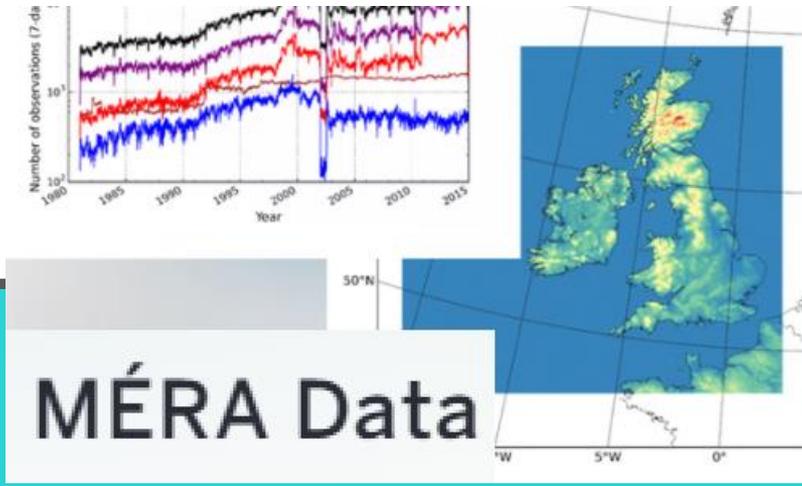
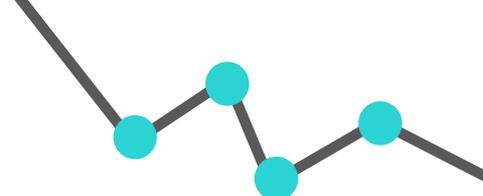
BLIGHTLINK

Coastal fog, mainland adjacent to Sherkin Island



... high humidity, blight favourable conditions.

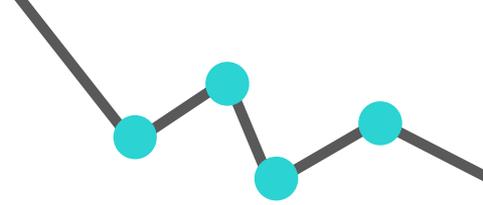
Effective Blight Hours 1981 - 2016



...extending Keane's work of 1957 – 1981

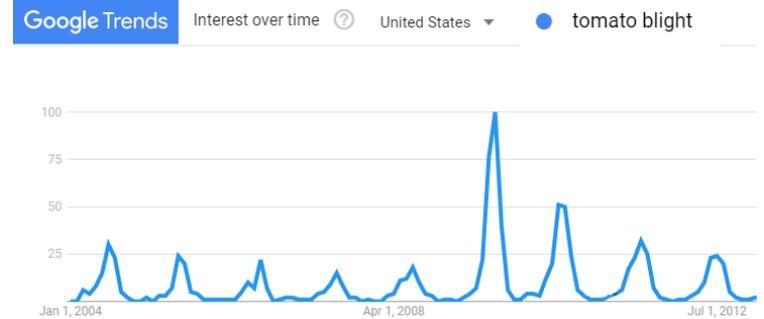
Application 1: Backyard growers

Case study - 2009 US Pandemic tomato blight



New York State cases of blight
Jun to Aug 2009.

13 States
North-east
and Mid Atlantic
region



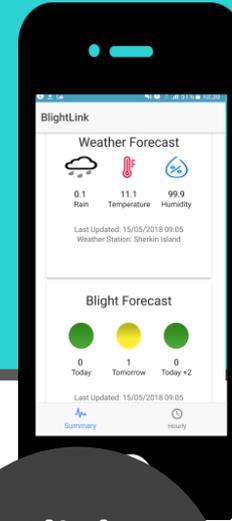
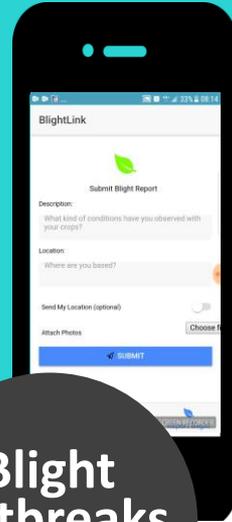
“You say tomato I say agricultural disaster”

New York Times 17 July 2009

...reduce the severity of blight outbreaks.

Application 2: BlightLink

Inform the roll out of BlightLink



Best Practice

Resistant Varieties

Flow of information

Blight Outbreaks

Real-time

Users upload photos of blight

Blight Warning

Prospective

Blight risk algorithm

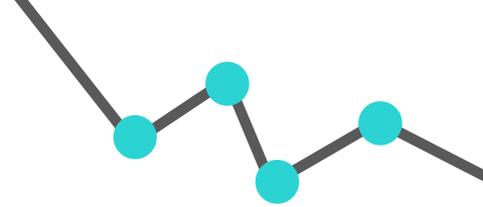


BLIGHTLINK

...reduce fungicide use in low risk regions.

Application 3: Climate change

Analysis of the impact of climate change on blight risk



TIME

 **Ecocentric**
All things green, from conservation to Capitol Hill

FOOD

A Warmer World Will Mean More Pests and Pathogens for Crops

Diseases like the potato blight have ruined harvests in the past — and still haunt farmers today. Research suggests climate change will spread those pests and pathogens

By Bryan Walsh @bryanwalsh | Sept. 02, 2013



BLIGHTLINK

... benchmark for future monitoring.



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