Sugarbeet Leaf Spots: Collaborative research between US and Canada

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Sugar Beet (*Beta vulgaris* subspecies *vulgaris*)

Important source of energy in temperate climates

~35% world sugar production, ~50-60% US

~ $2.5 billion/year nationally (ERS)

$136 million base value for in MI 2016 (NASS)

Production in the region - a farmer-owned co-operative with members in Ontario and Michigan

Same species as table beet and Swiss chard – disease issues similar

Subject to several leaf spots

One beet plant with four different leaf spots

Damage

Up to 40% yield losses reported when severe

July 27

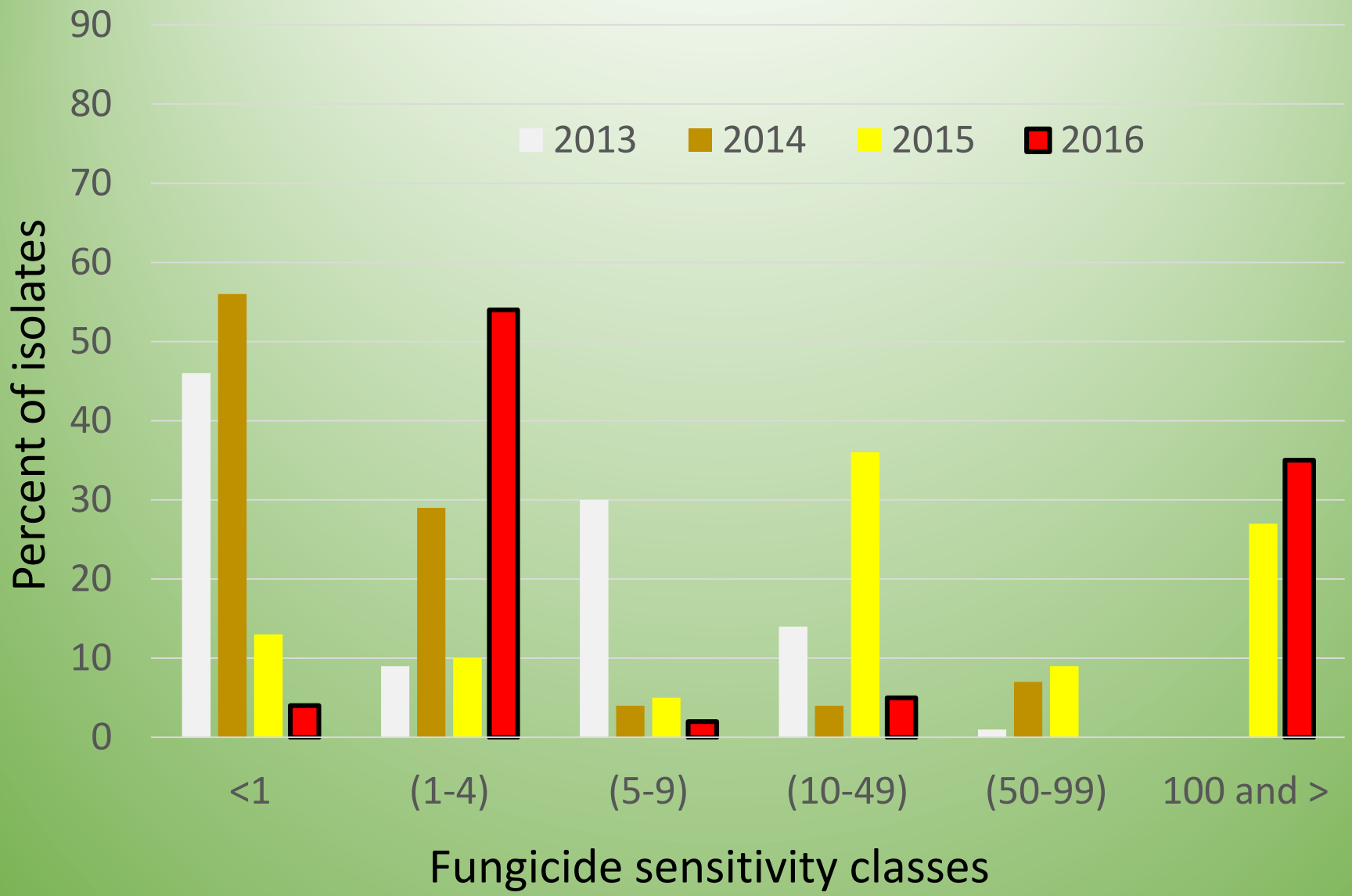
August 15

Collaborative Leaf Spot Research

- To improve leaf spot management

- Fungicide sensitivity screening
  - Screen from Michigan and Ontario
  - Joint publications http://dx.doi.org/10.5197/j.2044-0588.2017.036.020
  - Recommendations for growers

Changes over time



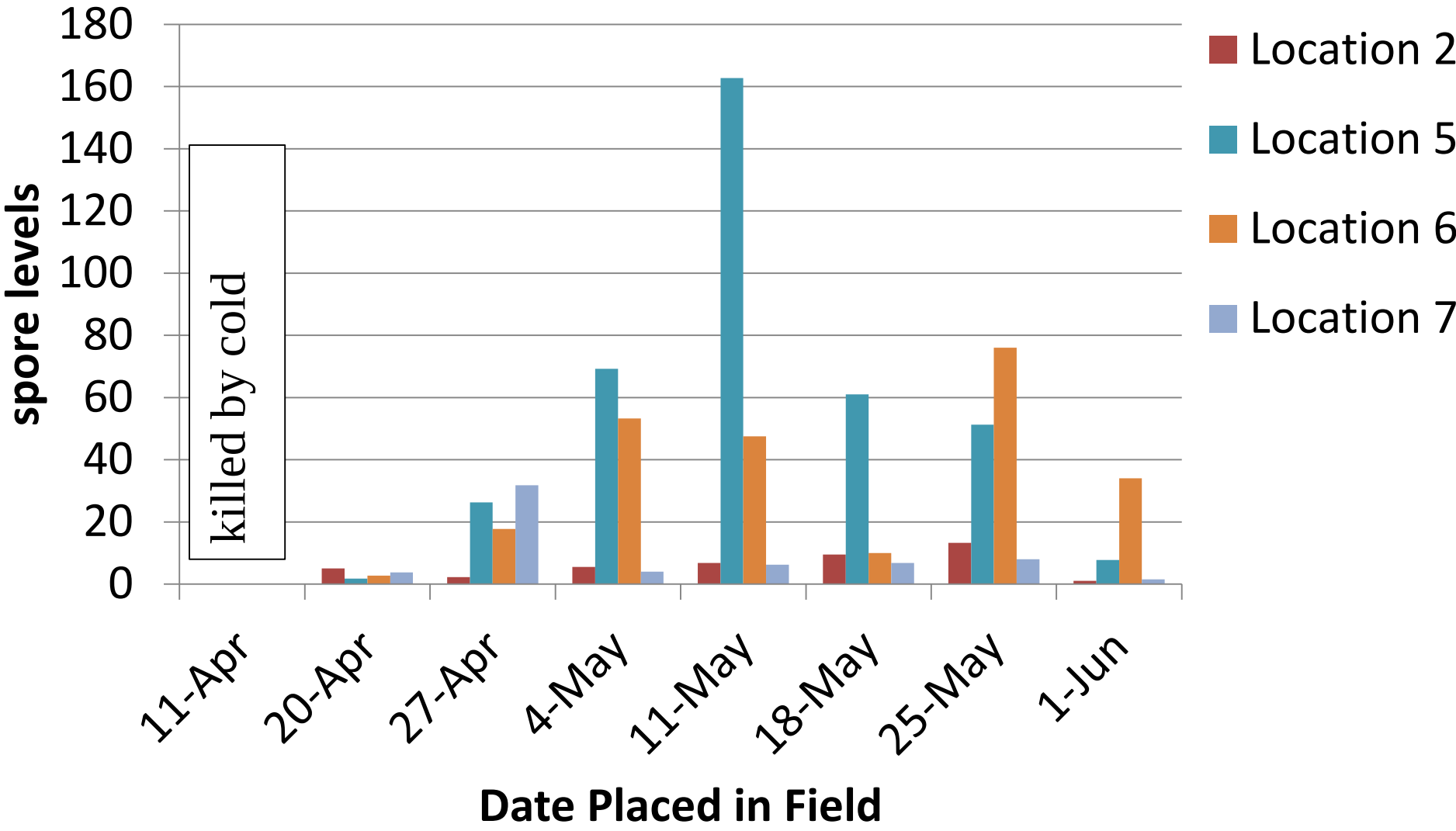
Disease models

- Leaf spot management timing based on models
- Recently issues
- Consider conditions for infection
- None consider presence of spores/inoculum

- Collaborative work to improve models by including presence of inoculum

Live (MI) and mechanical spore (CAN) traps with weather information

Test when spores present



Current model – predicted need to treat July 1, first disease in field June 1 (location “5”) June 15 others