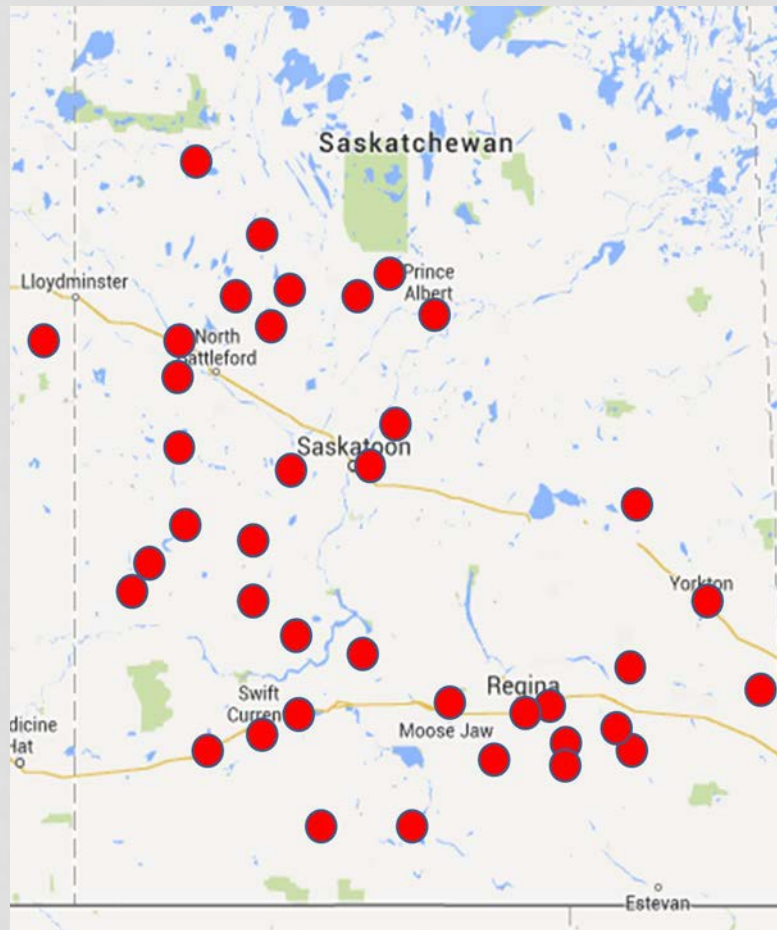


A microscopic image showing the structure of Aphanomyces. It features several large, spherical zoospores with multiple concentric layers, attached to a network of thin, branching hyphae. The background is a light, textured surface.

APHANOMYCES

RESEARCH AT THE UNIVERSITY OF SASKATCHEWAN
CROP DEVELOPMENT CENTRE
C. Armstrong-Cho and S. Banniza

ARR IN SASKATCHEWAN



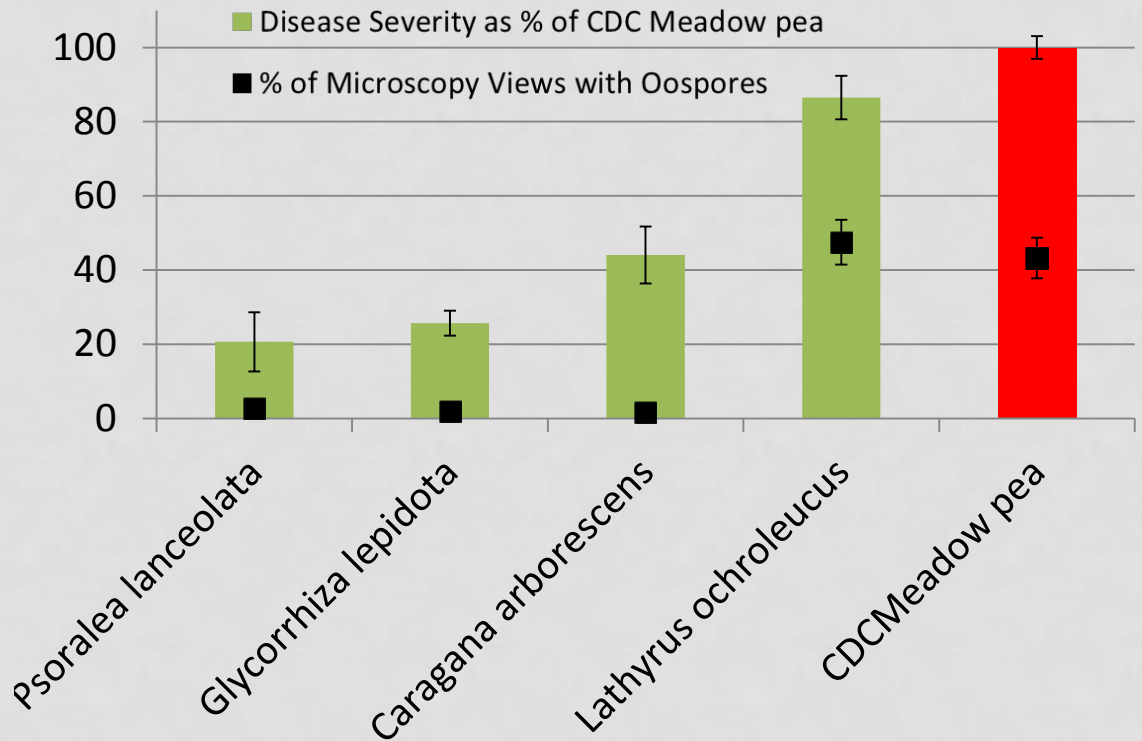
- *Aphanomyces euteiches* first detected in Saskatchewan in 2012
- Widespread in pea and lentil growing regions

SCREENING OF LOCAL CULTIVARS

- Popular cultivars and advanced breeding material were assessed for susceptibility to ARR
 - Collaboration with AAFC Lethbridge - S. Chatterton
- Susceptible – pea, lentil
- Partially resistant - chickpea, dry bean, faba bean
- Partial resistance in some cultivars - alfalfa, cicer milkvetch
- Non-hosts- fenugreek, sainfoin
- Communication with growers - crop choice and rotation

NEW HOSTS

Implications for disease management ↔ weed management



BREEDING OBJECTIVES

- Rapid generation technology (RGT)
 - Shortened generation time
 - 68 days for pea,
 - 61 days for lentil



- Currently working to integrate RGT with ARR screening
 - Reducing stress
 - Best practises for transplant survival

BREEDING OBJECTIVES

- Move resistance traits from USDA pea germplasm into adapted cultivar
- Identify a good source of resistance in lentil for our local pathogen population
 - *L. ervoides* (R. McGee field screening)
 - *L. culinaris* land races (L. Porter program)

Acknowledgement



SASKATCHEWAN
pulse
Growers

