

FEATURING  
DEREK RENNIE

# DR. STRANGELOVE

OR: HOW I LEARNED  
TO STOP  
WORRYING  
AND  
LOVE  
GIS



aDR. STEPHEN STRELKOV

p DR. VICTOR MANOLII v HETING FU e ARD tTHOMAS ERNST

NOVEMBER 13

# PROJECTS

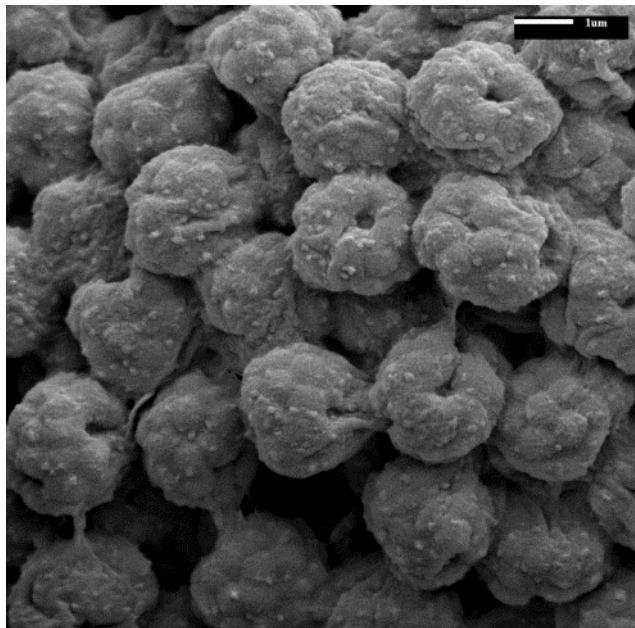
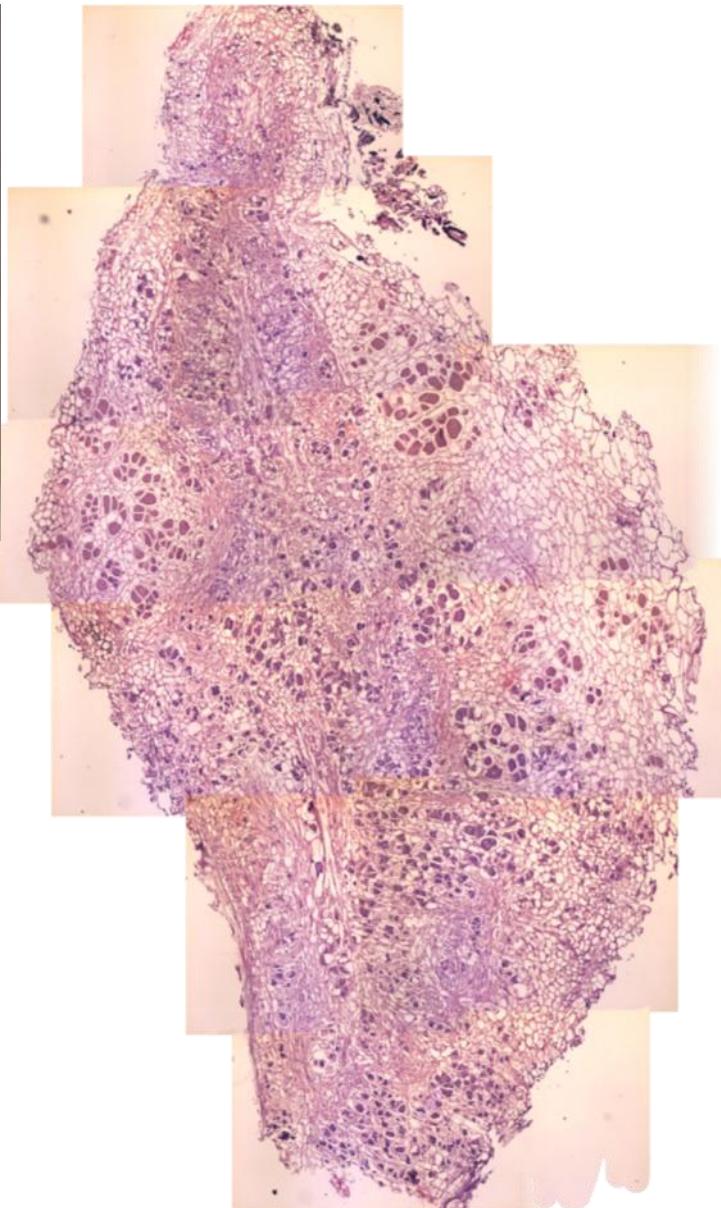
- Tan Spot of Wheat
- White Mold of Canola
- Net Blotch of Barley
- Blackleg of Canola
- Downy Mildew of Pea

And...

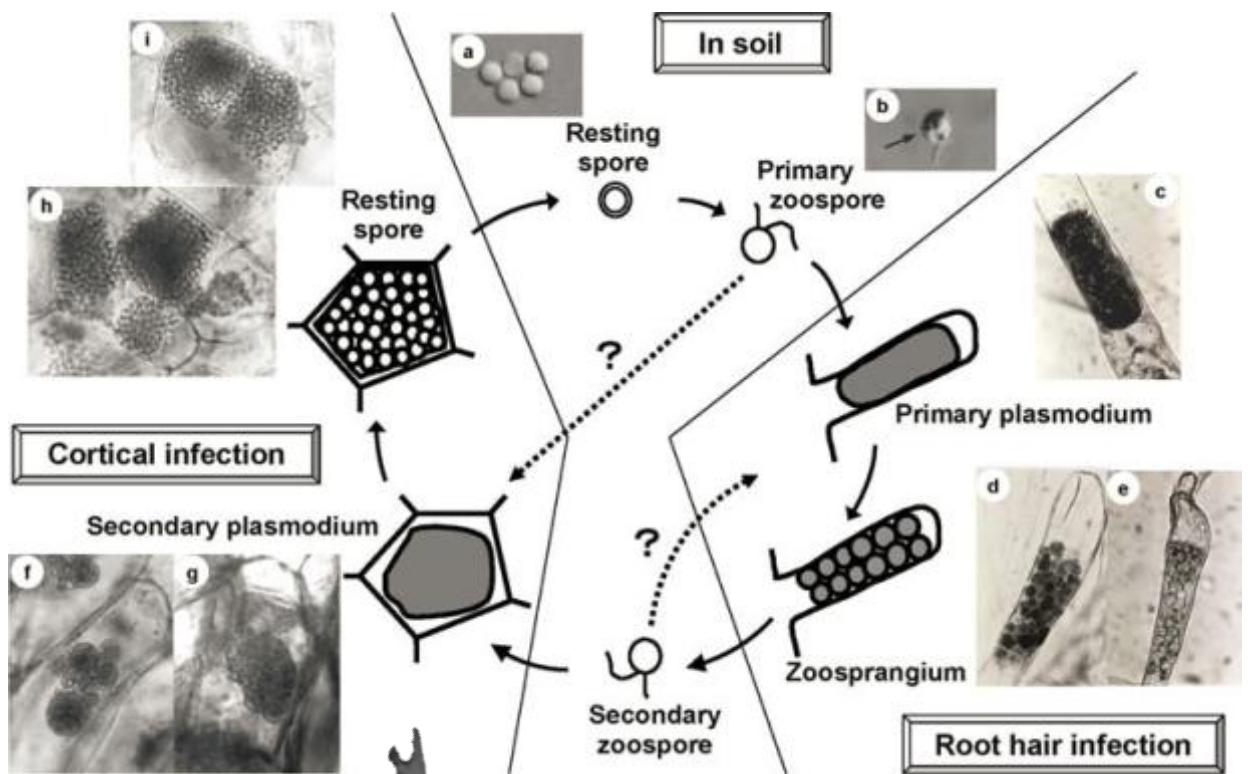


(Kubrick, 1964)

# CLUBROOT

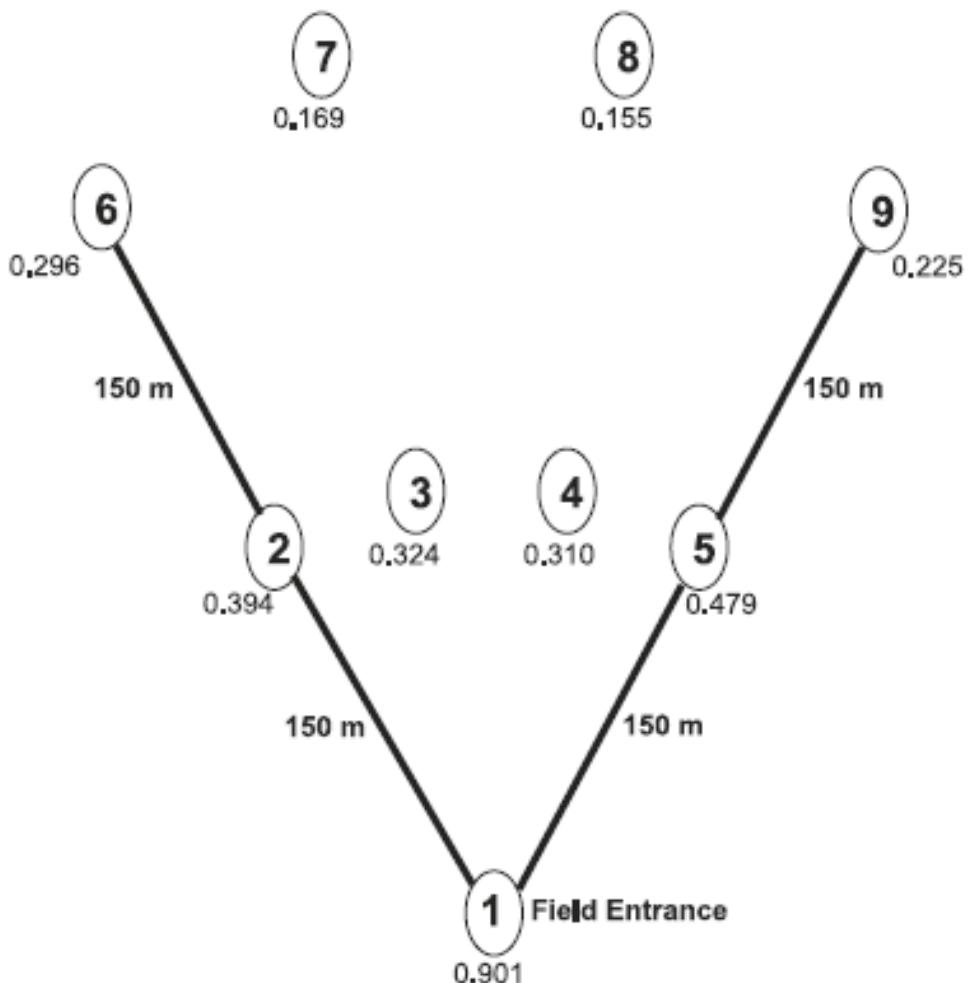


# CLUBROOT



(Kageyama and Asano, 2009; Kubrick, 1964)

# CLUBROOT IN FIELDS



(Cao et al., 2009)

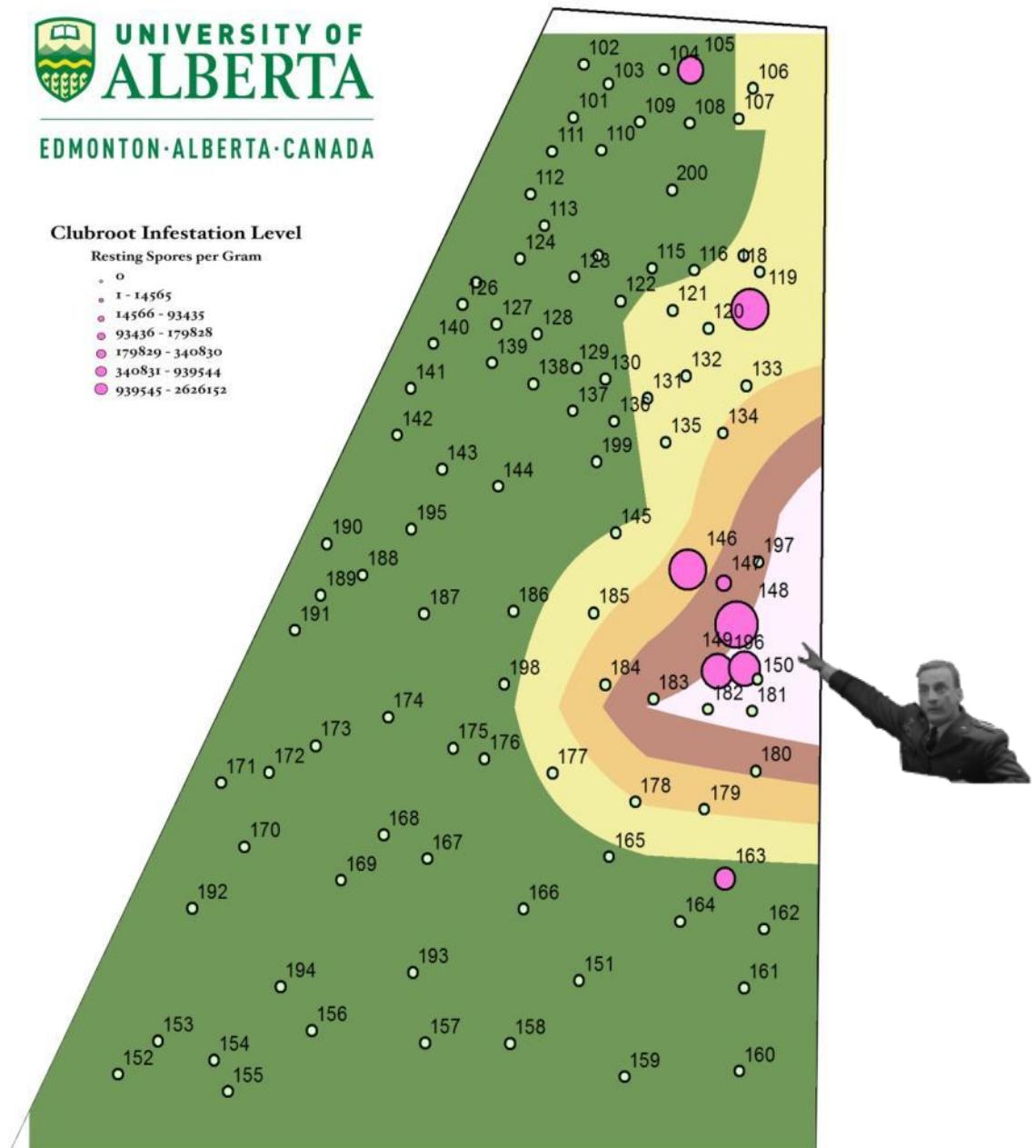
# CLUBROOT IN FIELDS



## Clubroot Infestation Level

Resting Spores per Gram

- 1 - 14565
- 14566 - 93435
- 93436 - 179828
- 179829 - 340830
- 340831 - 939544
- 939545 - 2626152



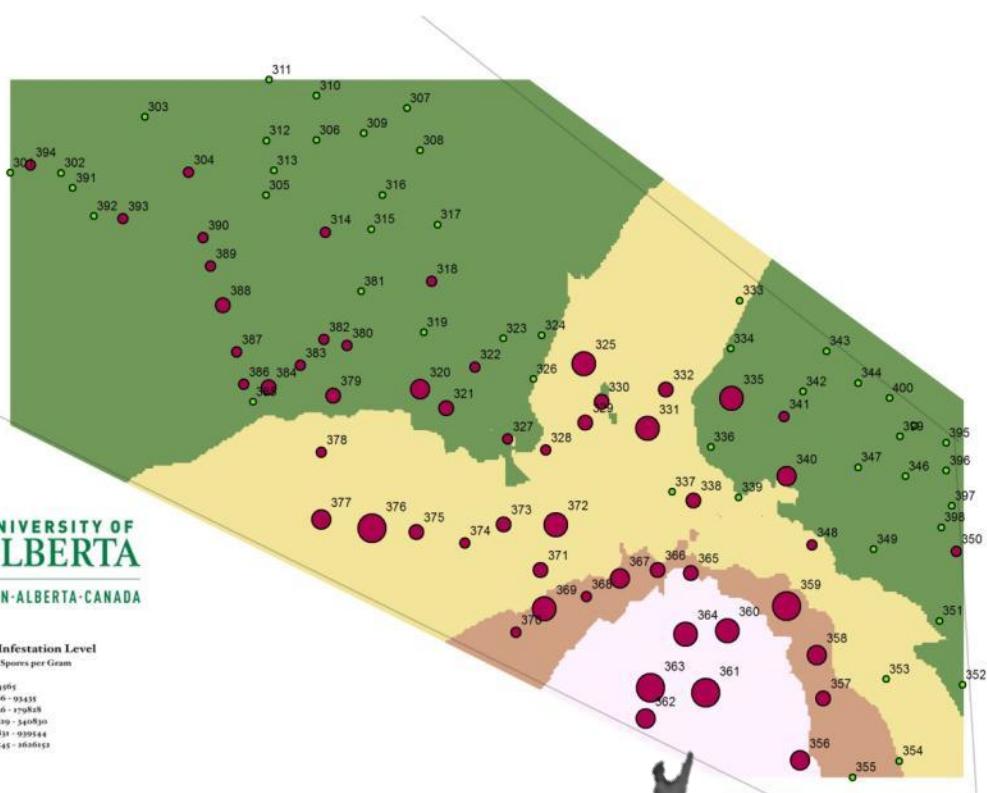
(Kubrick, 1964)

# CLUBROOT IN FIELDS



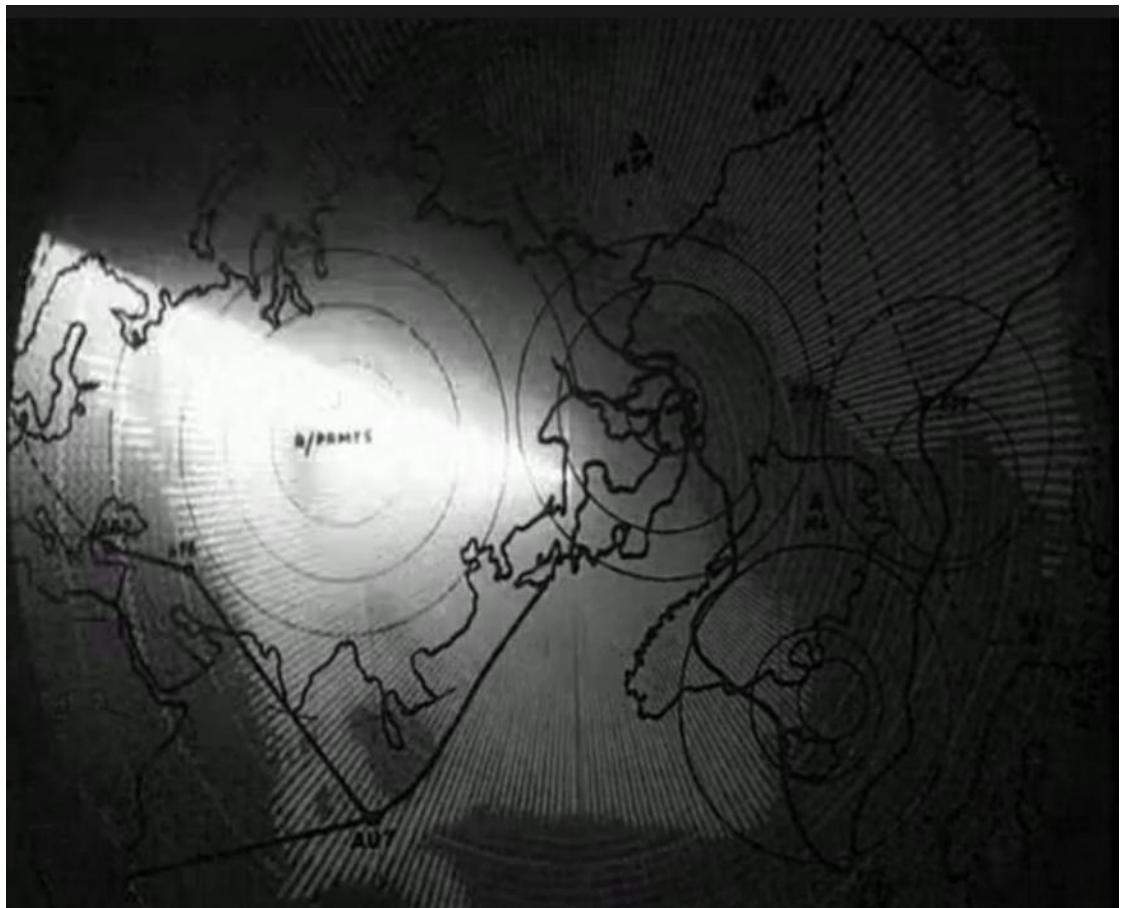
Clubroot Infestation Level

Resting Spores per Gram	
○	< 14064
●	14065 - 21415
○	21416 - 279828
○	279829 - 340830
●	340831 - 930544
○	930545 - 2626152



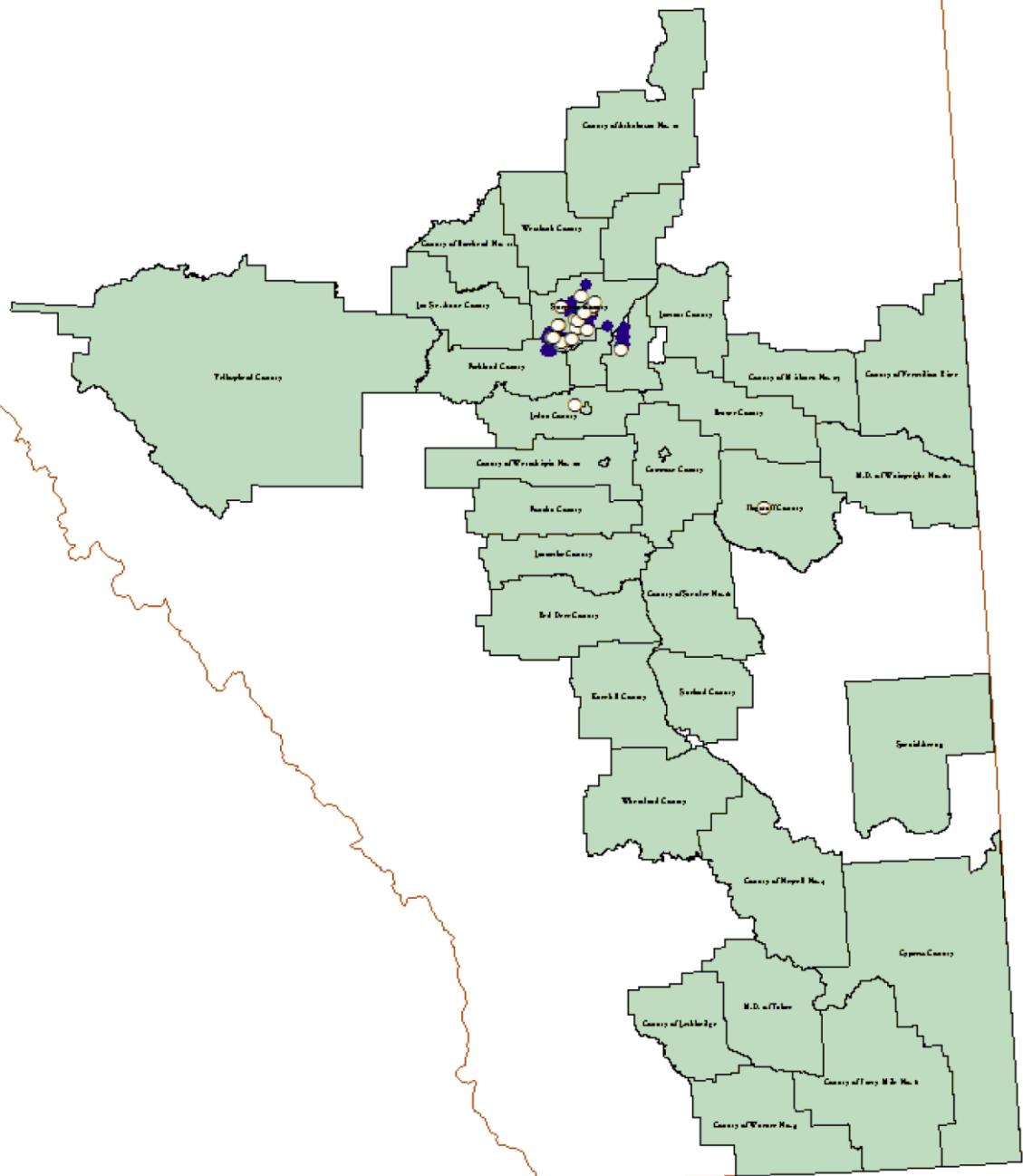
(Kubrick, 1964)

# SURVEILLANCE

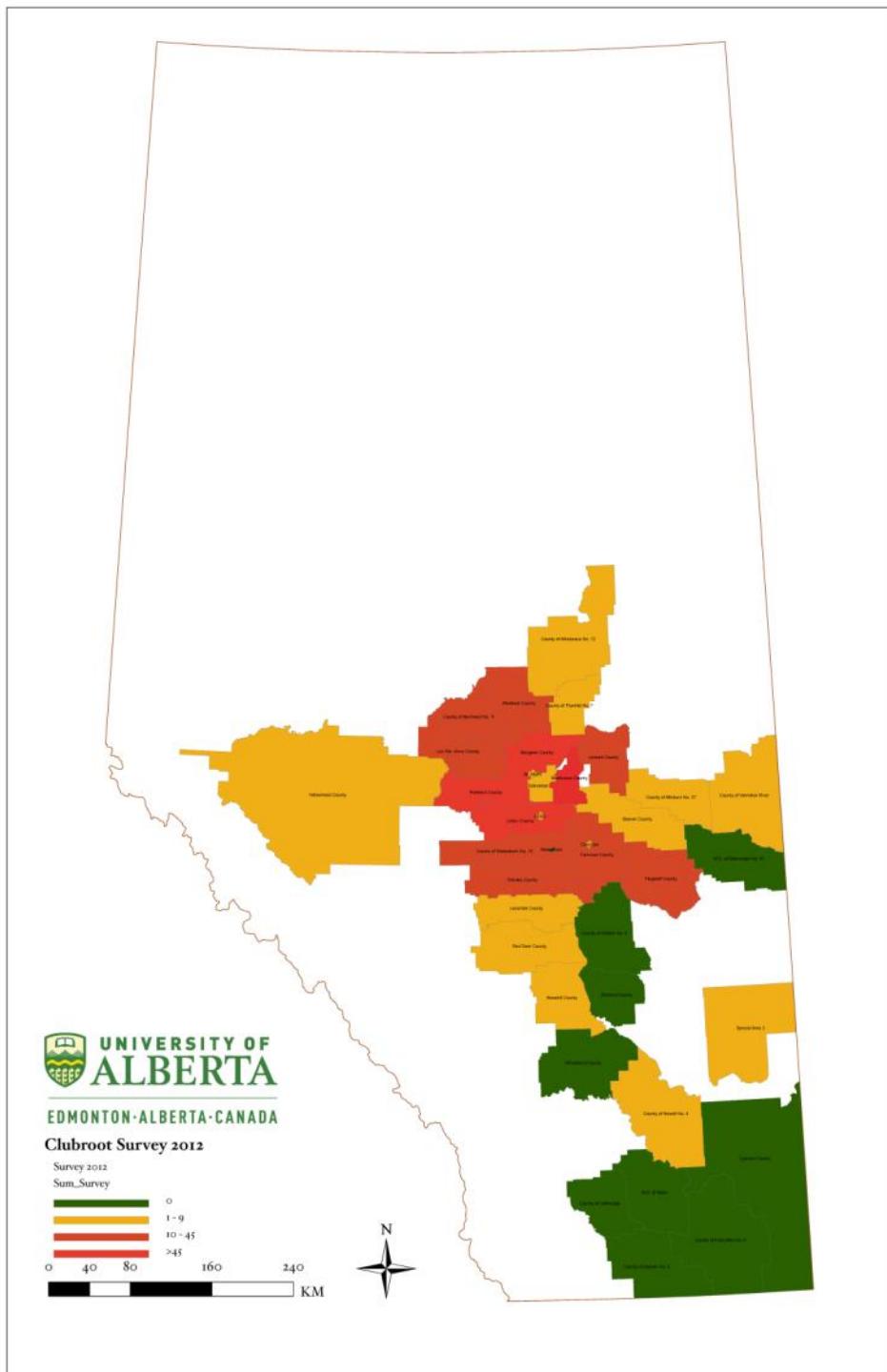


(Kubrick, 1964)

# CLUBROOT IN ALBERTA



# CLUBROOT IN ALBERTA



# DATA COLLECTION

- Data collected either on:
  - Juniper Archer Field Computer
  - Field Laptop with GPS antenna

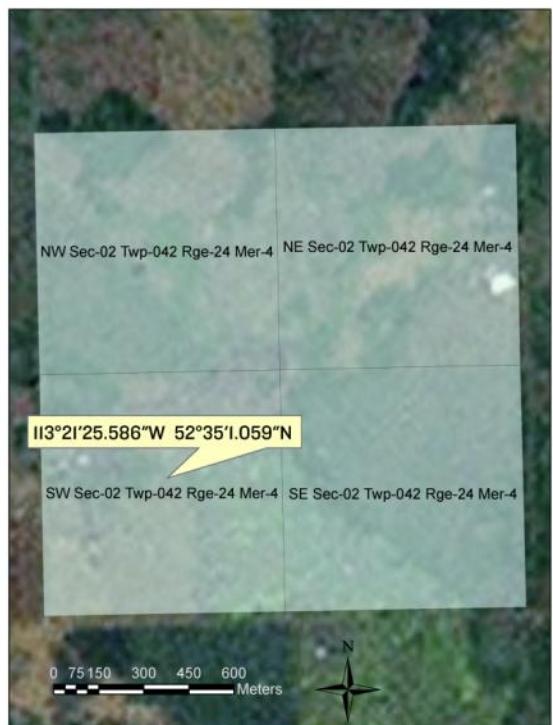
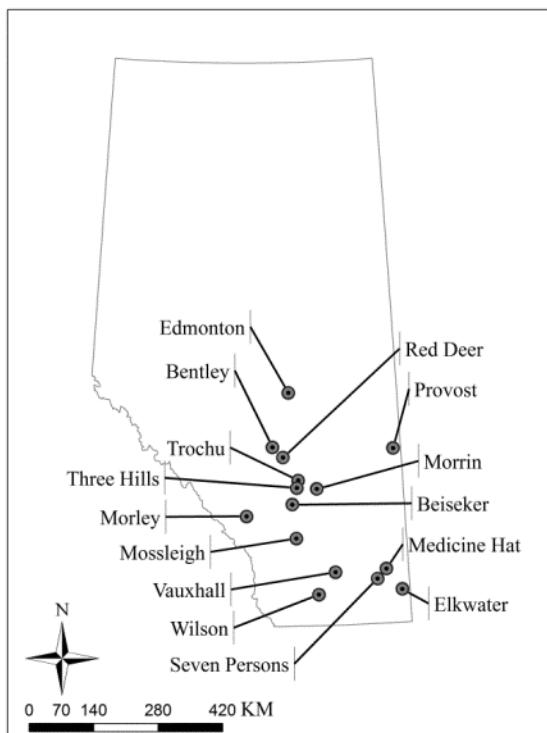


(Kubrick, 1964)

# DATA MANAGEMENT

- Physical maps and spreadsheet recordkeeping
- Now managed in ArcGIS
  - Data now query-able
  - Maintained in context
  - Standardized and accessible
  - More trips to the data library

# OTHER USES



# OTHER USES



# OUTLOOK

- Continued use during clubroot surveillance—adapt for other disease surveillance
- Spatial relationships between geographic features and disease
- New perspective on spatial data

# ACKNOWLEDGMENTS

- Dr. Stephen Strelkov and the plant pathology lab
- Agriculture and Rural Development

