



# CLUB ROOT AND THE FARM GATE

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# CLUB ROOT AT THE FARM GATE

- ⊙ Farmer / Consultant interaction
  - ⊙ Solid Ground Protocol
  - ⊙ Client customer privilege, where the disease is present as it relates to SGS and clients
- ⊙ What farmers/consultants are faced with
  - ⊙ Logistics of cleaning
  - ⊙ What happens when you clean but others do not
- ⊙ Where do we go from here

# 2007 - SOLID GROUND SOLUTIONS

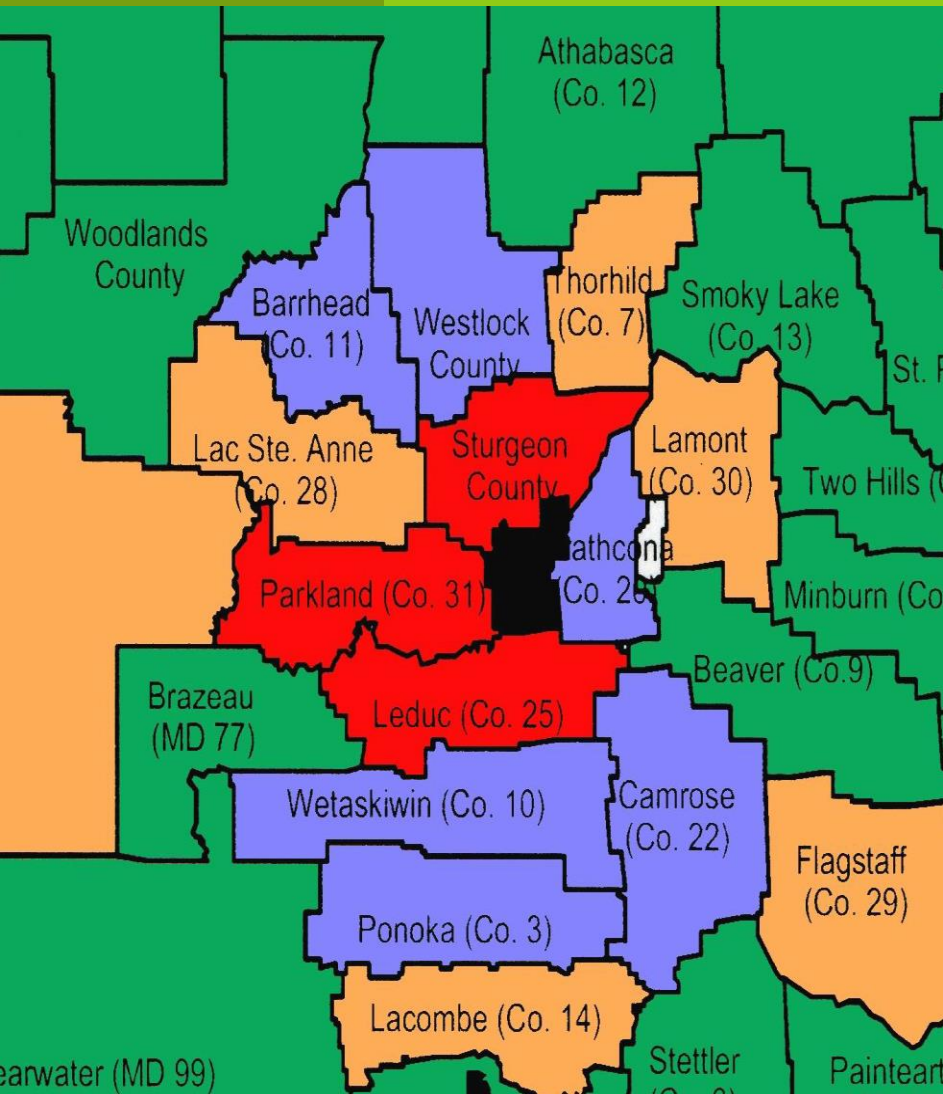
- ◎ 2007 Solid Ground Solutions was formed
  - ◎ Pinnacle of concern for the farmers
    - Little information
    - Imposition of mandatory 5 year ban from growing canola
    - NO alternatives
    - Huge amounts of fear
  - ◎ Started with 20K acres of consulting and 15 growers – some had club root others had yet to find it

# CLUB ROOT PROTOCOLS

## INITIAL PLANS

- ⦿ Equipment will never enter another landowner's property without being cleaned as per the procedures contained within.
- ⦿ If the landowner is aware of Club Root, or any other noxious pest, on one piece of land, and that it does not exist on other lands, the piece in question will be treated as if it were a separate farm so that the spread of the disease/pest does not occur within the clients operation.
- ⦿ All footwear entering onto fields will either be cleaned in a disinfecting solution prior to entry or be covered in a disposable cover to prevent earth tag
- ⦿ In the event that Club Root is discovered on a said property, it will be disclosed only to the landowner/tenant and it will be his responsibility to notify the county
- ⦿ Material leaving the field in the form of tissue samples and soil samples will be kept isolated from other samples to ensure that no cross contamination occurs
- ⦿ Water alone will not be considered a cleaning measure, it must be used in conjunction with a 2% bleach solution or Dyna Quat 64
- ⦿ If considerable earth tag is evident on SGS Ltd's equipment it will need to be pressure washed and then treated with a disinfecting solution
- ⦿ If fields are too wet for ATV travel because earth tag is excessive, foot access will be used and all foot wear will be covered with disposable protection.
- ⦿ If the conditions are unfavorable for foot access or ATV, then remote sensing will be used to determine crop stress or issues related and no access to the field will be attempted
- ⦿ In extreme dry conditions with little to no earth tag evident the equipment will still be treated the same regardless of this absence.

# DISEASE LOCATIONS



- ◎ Number of recorded cumulative cases of Clubroot as of January 2011 per county
- ◎ Sturgeon County, Parkland and Leduc County are only counties actively identifying infected fields
- ◎ Wetaskiwin County currently does not have a protocol in place and therefore these numbers do not accurately portray the true level of infection
- ◎ Diseased field have been found within a 5 mile radius of Falun

# FIELD BOUNDARIES AND CR LOCATIONS (APPROX. 35K ACRES)

50% C.R. Infection

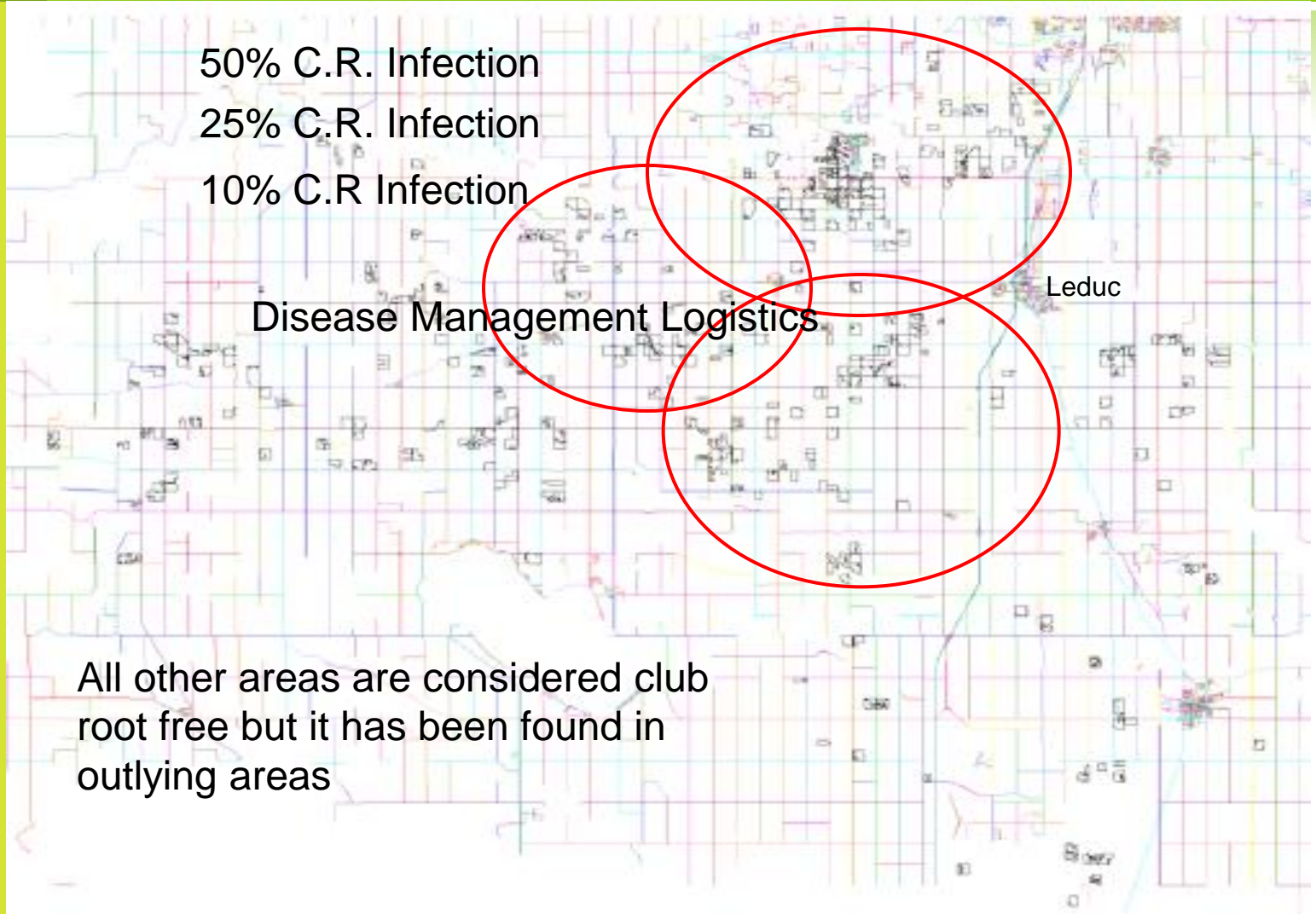
25% C.R. Infection

10% C.R. Infection

Disease Management Logistics

Leduc

All other areas are considered club  
root free but it has been found in  
outlying areas



# SGS AND CLUB ROOT



- This field does not have a club root letter attached to it but disease levels are high
- Only around the old abandoned lease.....more likely coincidence



# SGS CR STATISTICS

- ◎ 27 Agronomy Customers – 35,000 acres
  - ◎ 24 out of 27 have Club Root infected fields
    - Officially served notice or not
  - ◎ Most fields have been found since county implemented inspection protocols in 2007/08
  - ◎ Generally agreed that Club Root has been here longer than 2007

Conclusion by Farm Clients – If I have it one field, and not in another, it just a matter of time before I do, or it just hasn't been found yet



# DISEASE MANAGEMENT LOGISTICS

What has  
changed and  
the Farmer  
Attitude

# DISEASE MANAGEMENT LOGISTICS

- ⊙ Cleaning Equipment – No access to steam cleaners or portable pressure washers without making an additional purchase
- ⊙ This unit will be moved to the next field with most of the earth tag coming off on the road



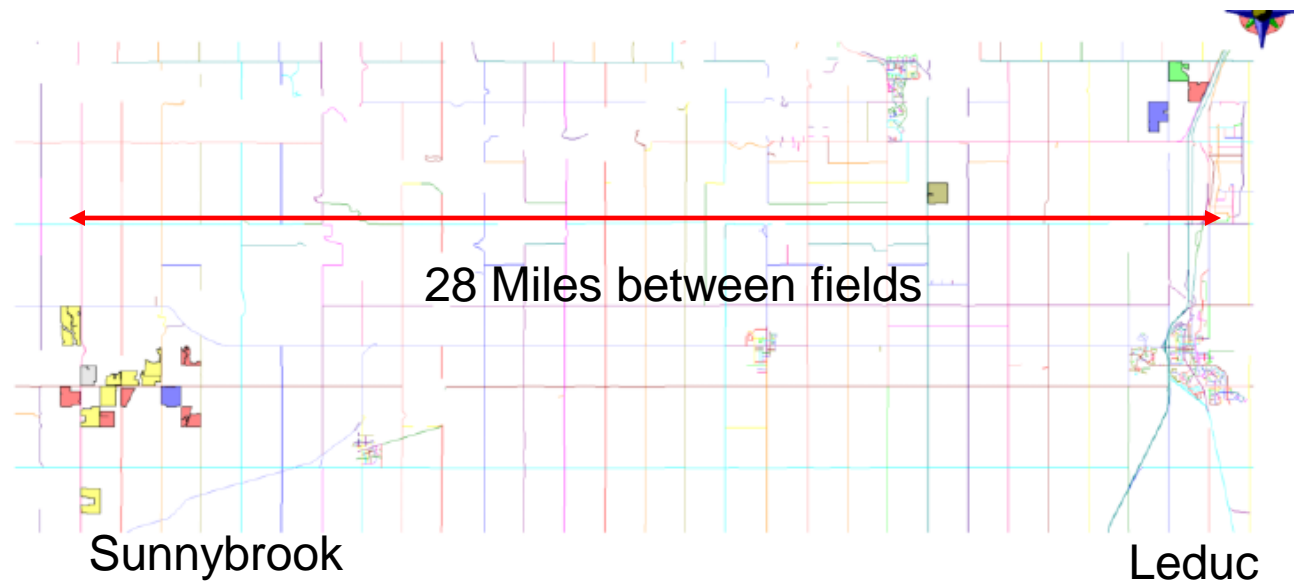
# FARMERS MOVE EQUIPMENT

If Farmer "A" cleans and Farmer "B" does not and leaves earth tag on the road, how can Farmer "A" avoid the problem



# DISEASE MANAGEMENT LOGISTICS - CONTINUED

Distance only adds to the problem



# DISEASE MANAGEMENT LOGISTICS

How does a farmer manage dust from one field to another during seeding?



Or at Harvest?



# DISEASE MANAGEMENT LOGISTICS



Farmers deal with trespassers  
both machines and wild life.....  
Both can carry the disease with  
them



# 2013 AND WHAT HAS CHANGED

- ⊙ Control what can be controlled – to a point
- ⊙ Farmers assume they have the disease, confirmation or not, and so do their neighbors. This includes county of Wetaskiwin!
- ⊙ SGS Farmers predominately only grow club root resistant varieties
- ⊙ They will wash equipment on occasion if the earth tag is excessive
- ⊙ Do what I say not what I do as it relates to others on their land – Oil and Gas (easy target)

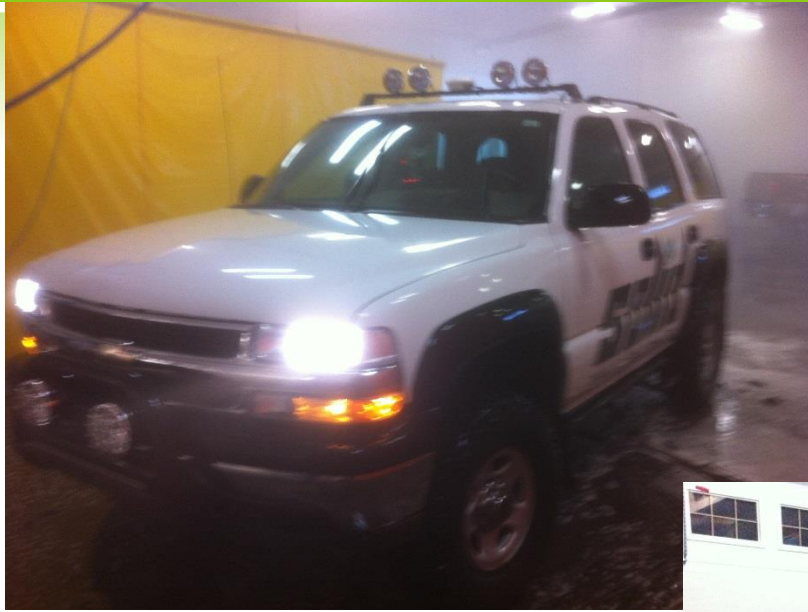
# IMPACT ON SGS

- ◎ SGS no longer has a 16 item list for club root protocol
  - ◎ Club Root protocol has been reduced to “CLEAN IN AND CLEAN OUT”
  - ◎ Each farmer will confirm if they have letters and which fields. These fields will be scouted or sampled last and then equipment will be washed.
  - ◎ Winter sampling Protocols do not apply



# SGS PROTOCOLS

Sampling Truck in  
the car wash



Scouting vehicle cleaned  
and ready for transport



Pictures are taken and sent  
to the farmers if requested

# CONCLUSION

- ◎ Club Root to a farmer in the county of Leduc is no longer a major concern
  - ◎ Grow resistant varieties
  - ◎ Manage rotations
  - ◎ Limit access – when possible
- ◎ SGS limits the spread / reduces liability
  - ◎ Clean in clean out policy
  - ◎ Scout for it in the fall during soil sampling to know where it is
  - ◎ Document all cases and pass information on to grower

# CONCLUSION

- ① Knowledge of the disease is high with many landowners/growers to date in the affected areas
  - ① There is still a sense of paranoia around the disease outside the area that is infected
- ① More advancements are being made in control measures and mitigation
  - ① Farmers will quickly accept the newest technology for managing the disease
- ① Solid Ground will always be faced with the fact the disease is here to stay, manage it accordingly