



L'UQAT

Research in Agriculture in The Great Clay Belt



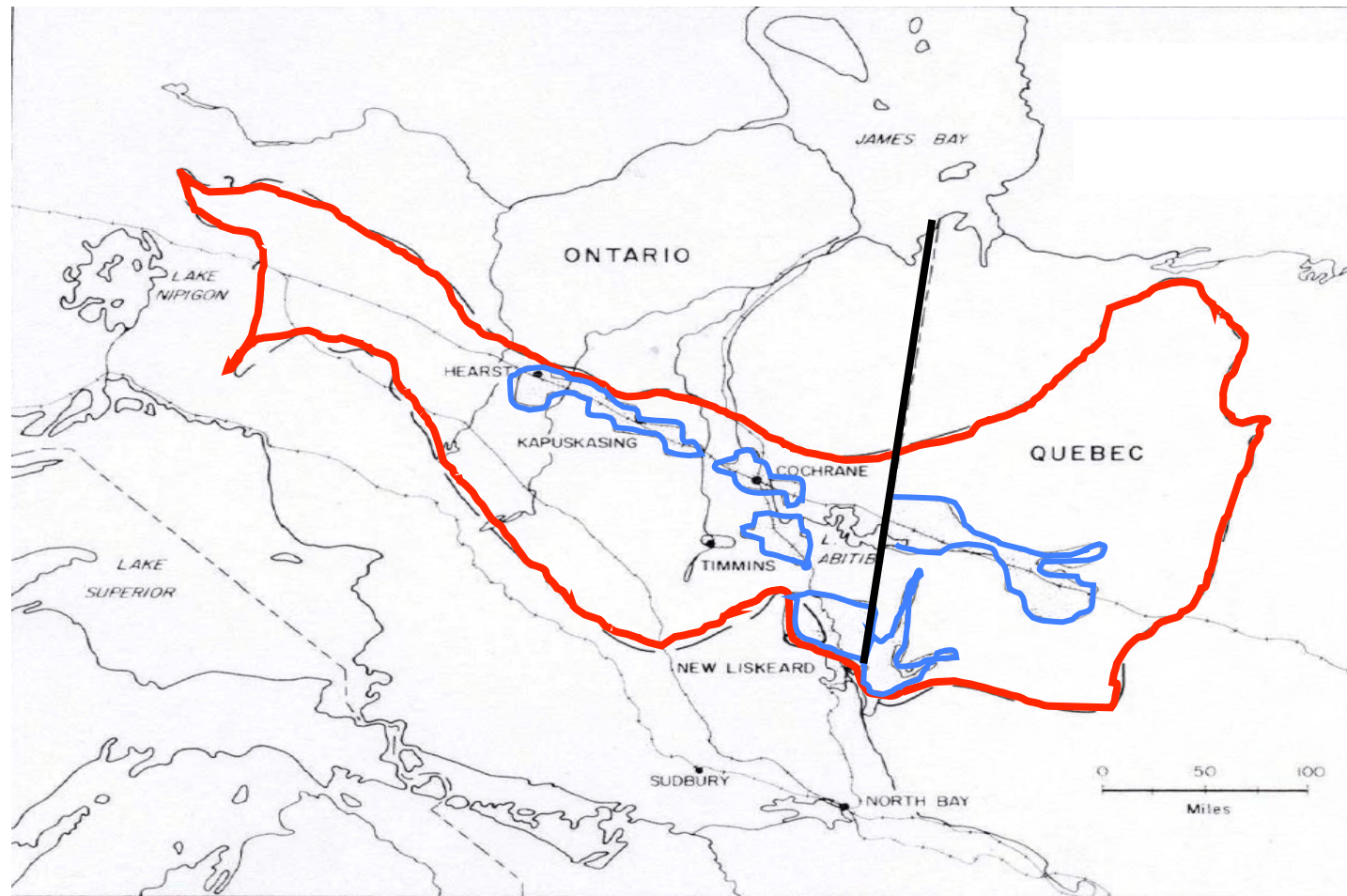


- ❑ UQAT has been doing research since 1997
- ❑ UQAT always works in collaboration with agricultural partners and stakeholders
- ❑ Despite cuts in 2014, UQAT maintained agri-food research in the list of priorities

Agricultural Research Strategic Plan 2015-2025



Our geographic context: The Great Clay Belt



Northern facts

- ❑ Land still available at fairly low costs
- ❑ Livestock and cash crops are opportunities to expand agriculture in the north
- ❑ Little research has been conducted on Clay Belt soils

Issues

- ❑ Increase of world population will necessitate a global increase of 40% more agricultural products
 - This will put pressure on good available agricultural lands

- ❑ Climate change

- ❑ Greenhouse gases

- ❑ Sustainable development



- Plant production systems and their contribution to biodiversity and soil quality in the Nordic environment.
- Carbon sequestration in the soils of agricultural and forest ecosystems and their contribution in reducing greenhouse gases.

Action Plan



- To increase our research team
- Ensure technology transfer
- To develop a service system for analyses

Research



- ❑ Grazing system with complex mixtures
- ❑ Soils and carbon sequestration

Complex Forage Mixtures: Multiple Effects

One species



Easy to
manage

Mixtures

↑ **Yield**
(Papadopoulos et al., 2012)

↑ **Yield stability**
(Sleugh et al., 2000)



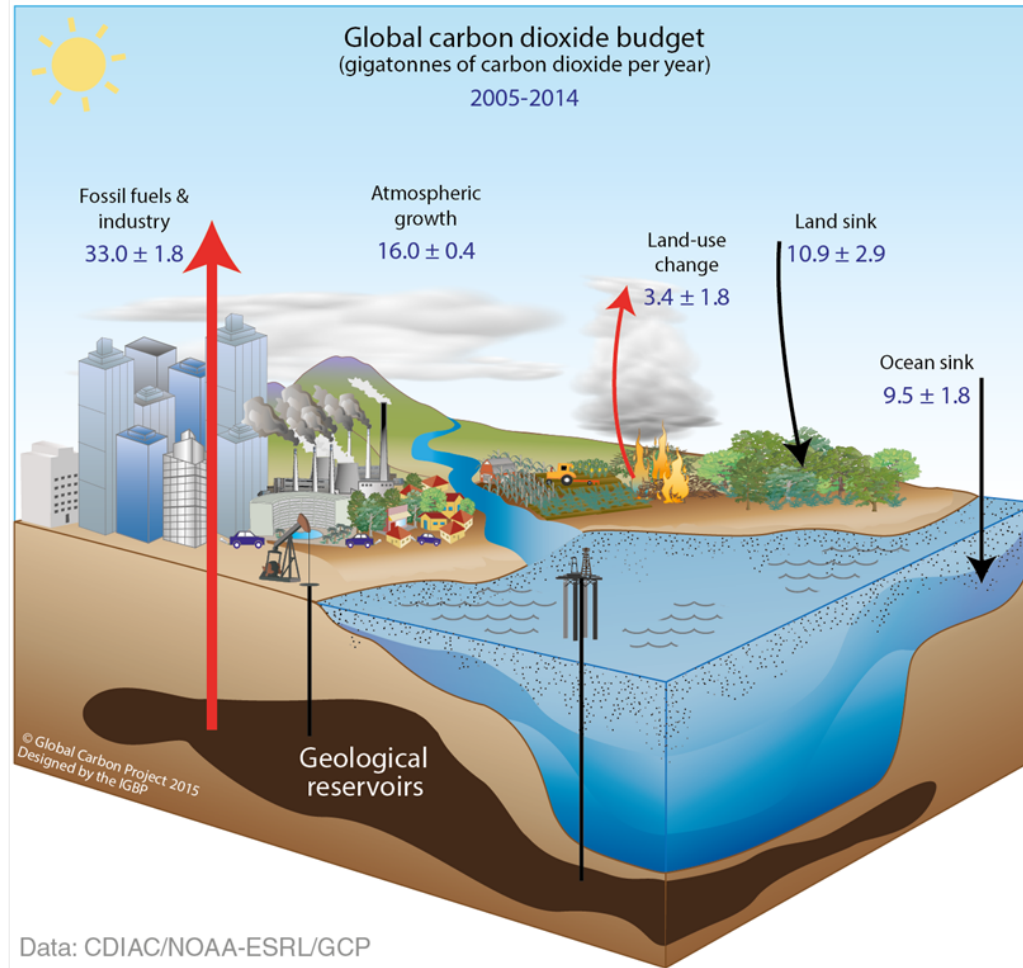
↓ **Weeds**
(Finn et al., 2013)

↑ **Nutritive value**
(Peyraud et al., 2009)

↓ **N-fertilizer**
(Nyfeler et al., 2011)

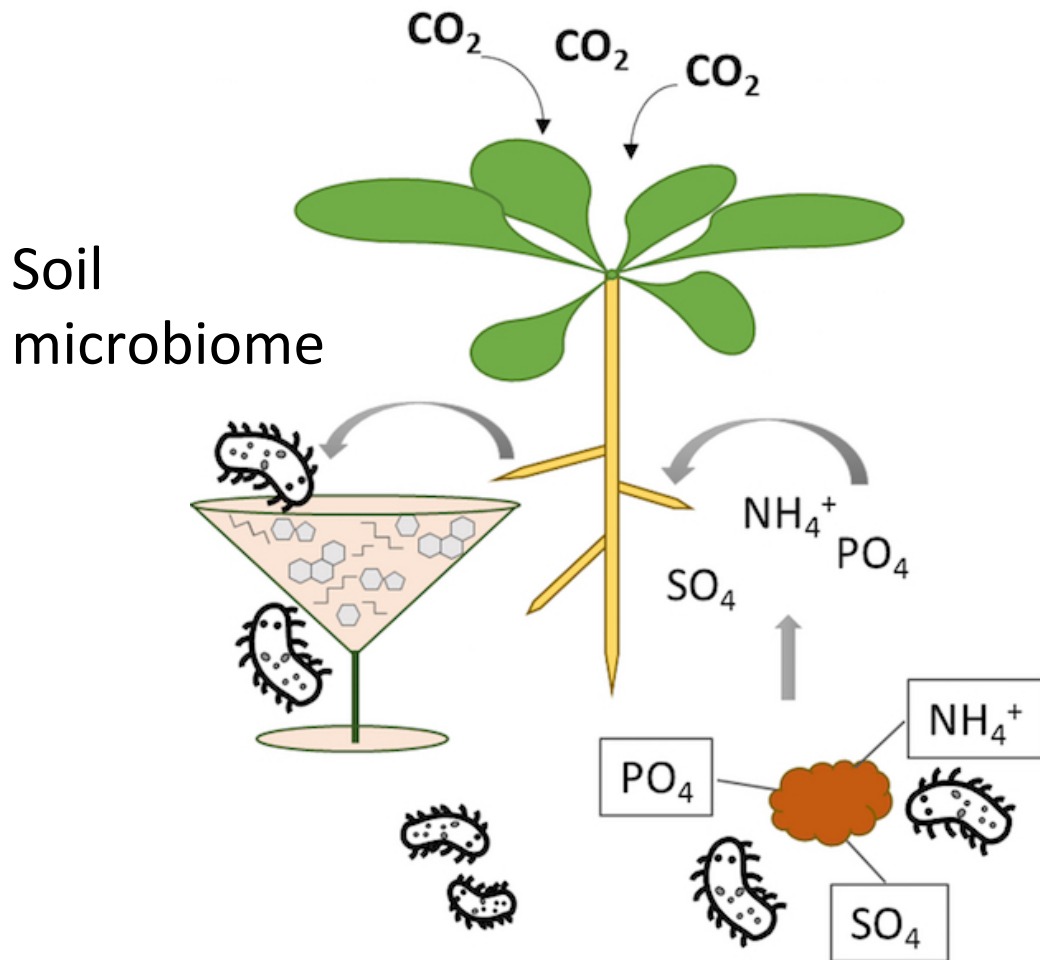
More difficult to
manage

Greenhouse gas: Carbon sequestration



- Impact of disturbances, land management, and vegetation

Plant production system, biodiversity and carbon sequestration



Continuous vs rotational grazing with complex mixtures

What about water, roots and C sequestration?

Technology transfer



- Webinars
- Field days
- Short programs/
certificates on
forage agriculture
- Reports and other
relevant
documents posted
on the web page of
the research
station

Services



- ❑ To develop a service system of analyses



Questions ???

