



Growing 2025

CAPI Optimizing Land Use for Sustainable Growth
February 21-22, 2019



Our Social Purpose:

“Transforming agriculture for a better world”



Landscape and Destination for 2025



Food production must increase by at least 50%
to feed 9 billion people by 2050



\$56,000,000,000

Canada exports \$56 billion per year in
agricultural and agri-food products

Olds College Smart Farm

OLDS COLLEGE SMART FARM

Phase One Crop Map



-  Rural Connectivity
-  In-Yard & Bin Sensors
-  Wireless Mesh Network
-  Agronomic Coaching
-  Data, Analytics & Machine Learning
-  Farm Management Software
-  Faculty & Student Instruction
-  Spectroscopy/AI Soil & Crop Evaluation(s)
-  Community Engagement
-  Weather Monitoring Station(s)
-  Olds College Smart Farm Design
-  Stationary Soil Monitor(s)
-  Equipment, Monitoring & Control
-  UAV

Olds College Smart Farm

- 14 Partners
- Over \$1 million in partnership support to date
- First Crop Year completed in 2018
- Scaling to 1800 acres
- 5 projects being implemented, 13 developing



How the land use could be optimized in such a way to improve environmental and social outcomes while maintaining and improving the sector's long-term competitiveness and securing "quality growth".

Productivity, Profitability, Sustainability

Regenerative agriculture (RA) is an approach to food and farming systems which aims to [regenerate topsoil](#), increase [biodiversity](#),^[1] improve water cycles,^[2] enhance [ecosystem services](#), support [biosequestration](#), increase resilience to climate fluctuation, and strengthen the health and vitality of farm soil, by recycling as much farm waste as possible, as well as adding compost material from outside the farm.^{[3][4][5][6]}

Retrieved from https://en.wikipedia.org/wiki/Regenerative_agriculture

Productivity, Profitability, Sustainability

- Soil Health Monitoring
- Regenerative Production Practices
- Applied Research

Nitrate-N - Surface



Data Collection Date: 8/28/2017

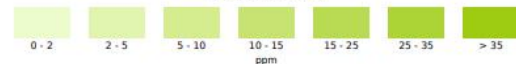


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Sulfate - Subsurface



Data Collection Date: 9/28/2017



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