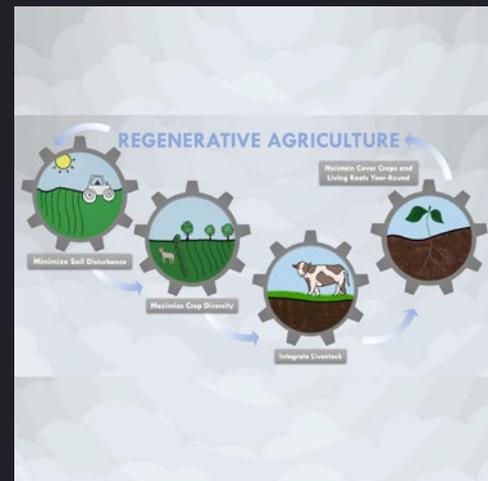


LRIC Horizon Series Highlights: Regenerative Agriculture

Highlights with Dr. Rene Van Acker, Ontario Agricultural College

As part of its Horizon Series project, the Livestock Research Innovation Corporation (LRIC) is writing white papers on key issues impacting the livestock sector and the entire livestock value chain. Each white paper is complemented by a webinar featuring a subject matter expert.

In this issue, Dr. Rene Van Acker reviews the principles and opportunities with regenerative agriculture. Van Acker is a weed scientist, regenerative agriculture expert and Dean of the Ontario Agricultural College at the University of Guelph, and co-author of LRIC's white paper Regenerative Agriculture.



“Regenerative agriculture is a renewal of a movement around the sustainability of agriculture.”

Dr. Rene Van Acker

Regenerative agriculture is a set of farming and grazing practices that benefit the health of agricultural land ecosystems by focusing on organic matter to revitalize soil health—creating a domino effect on positive health and environmental effects. There are numerous benefits that include improving soil organic matter, the water cycle, the soil's ability to storage carbon, as well as improving productivity and reducing energy use.

“We haven't done a great job of making claims to the world about the value proposition agriculture brings.” Dr. Rene Van Acker

Van Acker believes the agricultural community has some work to do to capitalize on the wonder of what farming does, especially when individuals like Elon Musk are promoting all the consumer products that can be made by capturing carbon out of the atmosphere—but with no mention of agriculture.

“Different kinds of farming systems have different impacts on soil organic matter.”

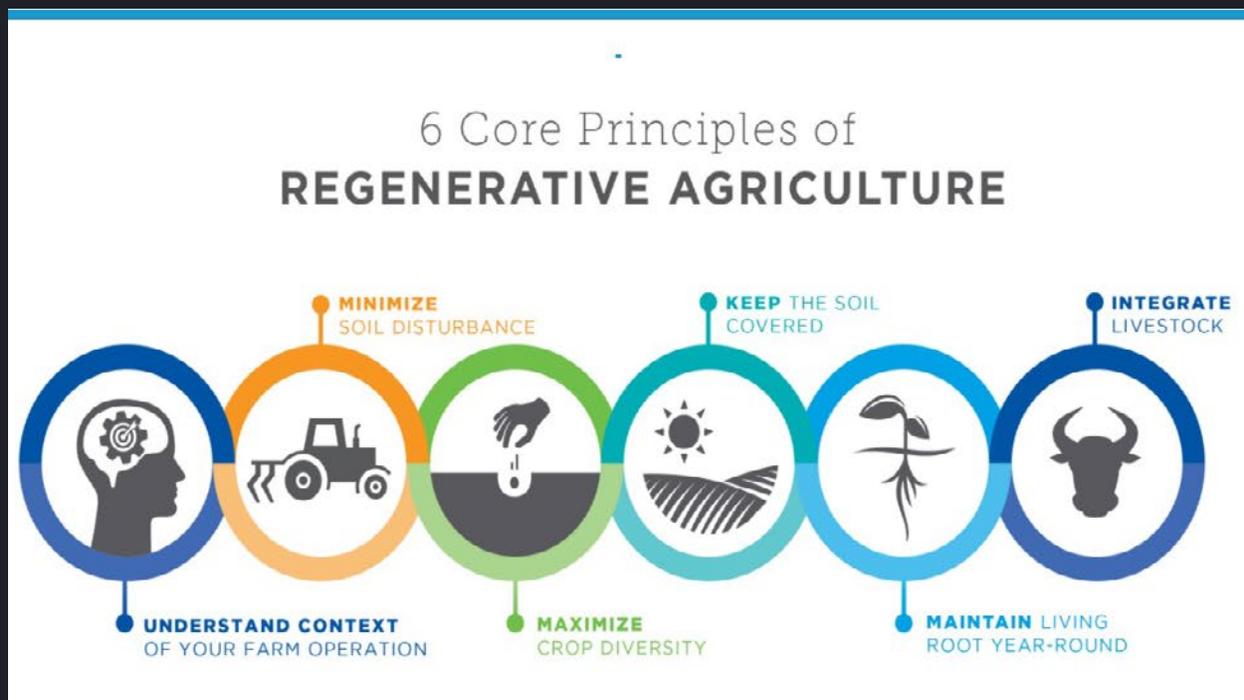
Dr. Rene Van Acker

Soil organic matter is a metric for healthy soils, an indicator of captured carbon and part of regenerative agriculture. Cropping systems that include forages (hay and grass used to feed livestock) have 1% more organic matter on average across Ontario. Van Acker stresses the importance of this type of data because only some farms are using forage, typically livestock farms. And forages like alfalfa are deep-rooted perennials that sequester carbon and fix nitrogen from the atmosphere.

“Patience and soil health are key factors in regenerative agriculture.” Dr. Rene Van Acker

The first step for regenerative agriculture is refocusing on the land used for raising livestock. We need to deliberately think about soil health as a primary goal on the farm and we know ways to measure soil health. Practices like rotational grazing and reduced/no-till cropping can take years before benefits like improved soil organic matter is realized.

“There are six core principles of regenerative agriculture.” Dr Rene Van Acker



“Regenerative agriculture is about changing and evolving the farm system, and it’s another opportunity for farmers and farm organizations to lead.” Dr. Rene Van Acker

Regenerative agriculture is a movement that is emphasizing soil health and the relevance to the carbon cycle and climate change. Van Acker reminds us that we know the fundamentals of why this is the right approach for agriculture, and the key is to take action to adapt regenerative



agriculture practices. And it's popular beyond the farming community. Data on carbon equivalents for a range of food products was developed at the University of Waterloo, and this kind of information matters increasingly to policy makers and the general public.

“The successful examples of regenerative agriculture are where farmers have chosen to do this.” Dr. Rene Van Acker

There are many sources available to help farmers adapt to regenerative agriculture, including the Ontario Soil and Crop Improvement Association (OSCIA) and the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA). But the most successful examples are farmers that are doing this of their own accord. They've been patient and are reaping the benefits of improved soil health and economic benefits too.

Watch the full webinar or review the white paper at livestockresearch.ca/white_papers. For more information, contact LRIC at info@livestockresearch.ca or 519-766-5464.

March 2021