

Natural Systems



Saskatchewan Farmers Grow Some of the World's Most Carbon-Efficient Crops



Saskatchewan farmers continue to build on a strong track record of producing crops with some of the lowest emissions intensities in the world. Earlier studies have consistently shown that Saskatchewan crop production performs well compared to many competing regions. A 2025 update by the Global Institute for Food Security confirms and strengthens these findings, using the most recent available data.

The updated analysis found that Saskatchewan crops have 96 per cent lower emissions for canola, 92 per cent lower for nondurum wheat, 73 per cent lower for durum wheat, 115 per cent lower for lentils, 107 per cent lower for dry field peas, 102 per cent lower for barley and 109 per cent lower for oats when compared with competing jurisdictions.

This performance is driven by the widespread use of practical and proven farming practices. These include no- and minimal-till farming, diverse crop rotations, nitrogen-fixing pulse crops and modern crop varieties. Farmers are also adopting emerging tools such as variable rate fertilizer application, which allows nutrients to be applied more precisely where they are needed.

Supported by rigorous, globally recognized carbon life cycle analysis (ISO 14044 and ISO 14067), these studies examined the full crop production process, including the transportation of farm inputs, fertilizer manufacturing, on-farm activities and post-harvest work. The update also assessed the carbon storage potential of agricultural soils.

Why It Matters

Saskatchewan farmers have a long history of adapting to weather variability and demanding growing conditions. This analysis shows how practical agricultural practices, shaped by real-world conditions and long-term experience, continue to deliver clear and measurable benefits. By applying rigorous, internationally recognized methods and building the evidence crop by crop, these studies demonstrate that agriculture supports responsible emissions stewardship while maintaining high productivity and strengthening Saskatchewan's position in global markets.

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