



# Does Canada make the grade when it comes to soil health?

**H**ow do Canada's soil practices measure up across the country? Are we improving soil health or not? Mario Tenuta, professor of applied soil ecology at the University of Manitoba, believes Canadian farmers are taking positive steps toward increased soil health from coast to coast, but we need to continue this trend for overall improvement in many areas.

Tenuta presented his soil health report card to attendees at the Summit on Canadian Soil Health in Manitoba this fall. Dividing soil health indicators into six categories, he presented grades on each for both western and eastern Canadian farmers.

## SO, WHAT ARE FARMERS DOING RIGHT?

### SOIL AWARENESS

To kick off the report, Tenuta says soil health awareness is good in both the west and the east. "There is a general interest in soil health and how farmers can maintain and improve soil structure and organic matter," he says. "I've seen this awareness increase especially in the last five years." Tenuta credits extension efforts, and the role universities and industry play in this increased awareness.

### COVER CROPS

Cover cropping and having vegetation on fields in the fall is something growers in Eastern Canada excel at, according to Tenuta. Farmers in the west need to do better though. Tenuta suggests farmers take the time to learn which cover crops fit in their specific farming operation, soil zone and geographical region so they can incorporate them into their rotations. Over time, cover cropping will become a more common practice and more locally adapted mixes will be available resulting in improved soil structure and increased organic matter. "We'll see it more on the Prairies in the future though as there's some great innovations happening there already," he adds.

### 4R NUTRIENT MANAGEMENT

4R Nutrient Management adoption rounds out Tenuta's top three soil health wins, but there is always room for improvement. "I see too much surface broadcasting of nutrients for my liking," he says, adding that carbon credits could be a good motivator to move away from this practice as well.

### AND HOW CAN FARMERS IMPROVE?

The one practice that needs a little more homework is better crop rotations. "The Prairies in particular have a lot of options, yet sometimes growers push the same crops in their rotations closer than necessary, which can lead to disease and resistance issues."

### THE TAKE-HOME ASSIGNMENT

Tenuta encourages growers to do their own report cards on their farms to identify where they would like to improve, but this needs to be done as part of a larger farm planning process. This is a key part of meeting current and future production goals and ensuring the sustainability of the farm operation for the next generation. "Soil health helps out the farm's bottom line. It increases yield potential and helps manage climatic variation by stabilizing yields and optimizing moisture," he says.

Do you agree with Mario Tenuta's assessment? Send him a Tweet @soilecologyUMan.

To find out more about soil health in Canada visit the Soil Conservation Council of Canada's website at [soilcc.ca](http://soilcc.ca).

## SOIL HEALTH REPORT CARD

To the Citizen Guardians of Canada  
House of Commons  
Ottawa, Ontario  
Canada  
K1A 0A6

Name	Canada	ID	18670701
Grade	Home Room	Teacher	J. Trudeau
152 years	Ottawa		
Report Year	Report Date		
2019	Oct 2		

Indicator	West	East	Final Grade	Comments
Soil Health Aware. SHA1000	B+	A	B+	Excellent recent improvement in familiarity with the subject / work required for practical application of the subject
Organ. Carb. Matters SOM2000	A	C-	C+	Needs to work towards a more consistent application of the subject matter
Biol. Divers. & You BDY2010	B+	B-	B	Clear potential for an A but recent shorter rotations in West and lack of crop alternatives to corn & soy problematic in East
Cover Crop. New Millenn. CCN3030	D	B	C	Lack of comprehension of subject matter in West / excellent progress in East in practical application of the subject
4R Nutr. Manag. Today NMT3040	B+	C	C+	Recent poor performance in West with broadcast application of N and East needs to try harder to band N
Soils & Crop Diseases SCD3050	C+	A	B	West's grain export industry and broad acreage of some grains makes for vulnerability on international markets / East