

# Cool, Wet Soils and Fertilizer Cuts

## *Why Nutrient Deficiencies Will Be a Big Story This June*

**It has been a spring of contrasts across the prairies.** A few pockets in southern Alberta and Saskatchewan remain dry, but most growers have been seeding into soils that are far wetter and cooler than normal. Add in the fertilizer logistics crunch, high prices, and last-minute rate cuts many producers made this spring, and we now have crops emerging into soils that are saturated, cold, and biologically sluggish. That combination is a perfect recipe for nutrient deficiencies that won't behave the way they usually do.

### HOW COOL, WET SOILS CHANGE NUTRIENT BEHAVIOUR

---

When soil pores fill with water, oxygen drops, root respiration slows, and nutrient uptake falls sharply — even when nutrients are present in the soil. Early-season nutrient stress is often invisible from the road; the plant may look fine above ground while struggling internally to move nutrients where they're needed.

### PHOSPHORUS: THE FIRST DOMINO

---

Phosphorus is usually the first nutrient to show stress at this time of year. Because P is extremely immobile in the soil, the plant relies on active root growth to intercept it. In cold, saturated soils, roots simply don't explore the profile the way they should. Many growers assume their soils have "lots of P" because it doesn't leach like nitrogen, but immobility cuts both ways: if the plant can't reach it, it might as well not be there. Since phosphorus drives early energy transfer, root development, and stand establishment, early shortages can quietly trim yield potential long before symptoms appear.

When symptoms do show, they're often subtle at first: slow growth, weak roots, uneven emergence. As deficiency progresses, young leaves may develop a purplish or reddish tint, often starting on the underside. In other cases, leaves stay dull green or blue-green, looking tight or rigid with delayed development.

### THE BIOLOGY HAS STALLED

---

Soil biology adds another layer of complexity. Many regenerative-minded growers rely on microbial activity to mineralize organic phosphorus, but those processes slow dramatically in cold, wet soils. Microbial P-cycling can drop by more than half when soils remain below 10°C. That means the biological engine growers count on to unlock soil phosphorus simply hasn't been running at full speed this spring.

Acidic soils can make the problem worse. In low-pH conditions phosphorus binds tightly with iron and aluminum, forming compounds the plant cannot access — even if recommended rates from early soil samples were followed. These acidic patches often develop in low-organic-matter areas or after years of high-salt fertilizer use, and they stand out even more in wet years when roots are already stressed.

## IT'S NOT JUST PHOSPHORUS

---

Other nutrients can be impacted by these conditions, too. Nitrogen can be lost through denitrification. Sulfur can move downward with excess moisture. Micronutrients become unpredictable — iron and manganese may become more soluble, while zinc and copper become less available. These changes can happen quickly, and visual symptoms often lag behind the actual deficiency.

### THE BOTTOM LINE

*Cool, wet soils hide nutrient stress until the crop is already behind. The most reliable way to understand what the crop is experiencing is to measure it directly — tissue and sap sampling give a real-time snapshot of nutrient levels inside the plant.*

## WHY SCOUTING MATTERS MORE THIS SPRING

---

This is why scouting matters so much this spring. Cool, wet soils hide nutrient stress until the crop is already behind. Uneven emergence, pale leaves, purpling, or slow early growth are all signals worth paying attention to. **But the most reliable way to understand what the crop is experiencing is to measure it directly.** Tissue and sap sampling provide a real-time snapshot of nutrient levels inside the plant — not what the soil should be supplying, but what the plant is actually receiving.

## WORKING WITH YOUR JOHNSTON'S AGRONOMIST

---

Having the right partner in the field makes all the difference. A Johnston's Regenerative Agronomist understands both the nutrient requirements of prairie crops and how soil biology, moisture, temperature, and pH interact to influence nutrient availability. That regenerative lens matters in a spring like this, when natural microbial processes are slowed and nutrient behaviour is unpredictable. Your agronomist can help you read the field accurately — from early scouting to identifying subtle symptoms that often go unnoticed until yield potential has already slipped.

Working with a Johnston's Regenerative Agronomist means you're not guessing. They'll help you scout at the right growth stages, collect tissue and sap samples when they're most meaningful, and interpret the results with the support of our PhD soil scientists. From there, we build a **custom foliar nutrient plan** tailored to your soil conditions, crop stage, and target yields — not a generic blend, but a prescription designed specifically for your field. In a year where fertilizer decisions were tight and soils are saturated, that level of precision can be the difference between a crop that merely survives and one that stays on track for the yield you planned.

### READY TO BOOK A FIELD VISIT?

Talk to your Johnston's Regenerative Agronomist about tissue sampling and a custom foliar plan for your fields.

**1-844-324-7778**   **[johnstonsregenerative.com](https://johnstonsregenerative.com)**