

THE NEXT “BIG” THING

In visiting growers and advisers to discuss nutrition within farming systems, the question often comes up about the next great stride in the science around plant nutrition. Is there something obvious we are missing with our current practices?

The list of essential nutrients is still led by large amounts of nitrogen, phosphorus and potassium, moderate amounts of sulfur, calcium and magnesium, and small amounts of boron, chloride, copper, iron, manganese, molybdenum, and zinc. Nickel was the most recent addition to the list, and plants also can benefit from supplies of aluminium, cobalt, selenium, silicon, and sodium.



It seems unlikely this list will extend to the whole periodic table, and so these are what we need to deal with in a healthy soil—which is probably enough to keep most farmers and agronomists scratching their heads.

As farming systems evolve, new angles on the old issues come up. For example, no-till farming can lead to nutrient stratification, different seasons can move nutrients around, high production systems can draw down micronutrients, and changing crops can make some nutrients more or less limited than in previous rotations.

While these are all important to keep in mind, the real next “big” thing is making reasoned and verifiable decisions about how to manage the nutrients we have and those we need to add. 4R Nutrient Stewardship places that process at the center of sustainable farming systems—matching the right source, applied at the right rate, at the right time, and in the right place.

Applying the 4R principles is the next big thing—smart management of those principles we think we understand. There are no “silver bullets”—and anyway silver is not one of the essential nutrients.

BETTER CROPS

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