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ADAPTING TO CHANGE – DOES YOUR NEIGHBOR NEED A NUDGE?

It is often heard that the world around us is constantly changing, and that if we are standing still, ... well ... then we are getting behind. Indeed, farmers today are immersed in the challenges of a global agricultural economy. What happens on the opposite side of the world may have an increasing and sometimes dramatic impact on each of us locally.

Like the certainty of death and taxes, ... two things that every farmer can also be certain of are changes in crop prices and changes in the weather. Fluctuations in precipitation and changes in temperature at some places in the last decade or two seem to be greater than what we may remember from the past. Some of the manifestations of those changes are being reported by some federal and state agencies as increased loading or delivery of N and/or P to streams and other water resources: possibly a result of some of the rainfall extremes, but perhaps also associated with crop and soil management practices and their impacts. How does one prepare for uncharted changes in growing conditions, or the risks of nutrient losses from fields, which are difficult—if not impossible—to accurately predict?

In the face of the record drought of 2012 and the record spring rainfall of 2013, some in the central U.S. anecdotally observed that crops produced on fertile soils, which possessed good soil organic matter levels and good tilth, seemed to fare better and were more resilient. In addition to the blessing of good soils, some farmers experienced benefits to changes in the way they traditionally applied their nutrient inputs. Crop N sensors enabled many to respond to the environmental conditions by applying less or more inputs, and at more optimal timing. Other farmers observed less runoff loss of nutrients when inputs were applied beneath the soil surface; either by subsurface banding or some soil tillage incorporation. An important corollary to the well-recognized statement by Franklin D. Roosevelt—"A nation that destroys its soils destroys itself"—is the fact that proper management and improvement of soil fertility and soil productivity may preserve and sustain the human family (especially during trying environmental conditions).

Many of us do a fair job of evaluating what has been done in the past, on our own land, yet we often hear coffee shop comments like, ... "that neighbor needs to sharpen her/his skills and plan a little better next year." Increasingly, such neighborly observations are resonating all the way to Washington, DC and farmers are expected to do a better job of getting more and more of their applied nutrients into the crop, while allowing less and less to escape their fields. Many farmers today are doing a much better job than in the past, ... but still there may be others who need a "neighborly nudge" to initiate beneficial soil and cropping system management changes. Some of the largest challenges for implementing adaptive management and changes in farming practices may be associated with more and more land being rented or leased, as opposed to being owned by the farmer/operator. Complexities of some ownership scenarios may hinder openness to trying new and different practices, or receptivity to management changes that sometimes are best cost-shared between landowners and renters.

To successfully adapt to change, and achieve the soil and nutrient stewardship increasingly expected—or required—by society, what nudging do our "neighbors" need?

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Abbreviations: N = Nitrogen; P = Phosphorus.