From The Publishers

We commented several years ago about transitions we’ve had with the Fluid Journal since its inception in 1963 from print to the internet. It has vastly expanded our audience to where we are read in 104 countries and regions throughout the world, introducing or informing a vast sea of readers on all the advantages of using fluid fertilizers to nourish crops to produce even higher yields. We don’t need to inquire of our readers by phone or mail about their interest in the proven value of applying fluid fertilizers in crop production. Moving on ahead, we can potentially indicate a higher seed rate.

Another article covers closing yield gaps by reducing variables induced by weather and soil type. One study showed how when water was a non-limiting factor, yield variability was minimized and yield advantage, between farmer practice and use of a balanced approach, was maximized. It also demonstrated that closing sorghum yield gaps can be partially achieved when variability induced by weather and/or soil type is reduced.

For years the wisdom of the entire Fluid Journal archive has been available online in downloadable PDF form from the FFF website. However, web access was required. Then the Fluid Journal entered the age of digital publishing and began to publish new issues online at www.fluidjournalonline.com. The online digital edition enabled the Fluid Journal to extend its reach around the world. Today we are seen in 104 countries and regions around the world, and have had readership reports where pageviews ran in excess of 90,000 over a year’s time. These are not guesstimates done by phone or mail surveys but electronic hits. We know by electronic hits who our readers are, how long they stay on line, who are new and those who return regularly.

Moving on Ahead

The Fluid Fertilizer Foundation (FFF) App has already proven to be as popular as our flagship Fluid Journal online digital edition. The search App is available at Apple App Stores for iPhones and iPads, as well as Google Play Stores for Android smart phones and tablets.

Summary: The Fluid Fertilizer Foundation’s new search App delivers.

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But, now in our lead article, you will learn from our digital publishing consultant, Ken Cooper, how we have expanded beyond the internet so that you can carry the wisdom of the entire Fluid Journal and its archives via a search App that fits in your pocket. No longer are you confined to any particular location. You can be in a farm field or traveling by air and search the vast field of information within the Fluid Journal. And typical of that vast field are some penetrating articles in this issue of the Fluid Journal on subjects presented in February at this year’s FFF Fluid Forum at Talking Stick Resort in Scottsdale, Arizona.

One covers an interesting study on the use of variable-rate seeding to manage in-field spatial variability. The study shows that relationship between plant population and yield follows a quadratic function where an optimal matter content, can potentially indicate a higher seed rate.

The trigger bringing all this has been yet another opportunity called “Apps.” Dr. Dale Leikam, President of the FFF, envisioned an App that would make the entire Fluid Journal archive accessible from anywhere, without undue complexity, slow search times, or even the need for internet access.

“Imagine carrying wisdom in your pocket.”

The FFF Search App was created as a self-contained search engine in App form, providing instant access to the wealth of data and research contained in the Fluid Journal archive. Both simple and complex searches can be accomplished.

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Spatial variability exists in most farming contexts and farmers are trying to find ways to further increase their productivity by managing this variability. Among the various input management options, variable rate seeding appears as a logical way to manage in-field spatial variability. Worldwide

Within-field spatial variability of soil chemical and physical properties (Figure 1) exists in most agronomic environments around the world. There are many natural and anthropogenic (human-made) reasons ranging from geological properties, landscape positions, or climates to as simple as uneven hand broadcasting of inputs in small-scale farming, or merging of fields with different crop histories in medium-to-large-scale farming.

Quantifying

Over the last two decades of precision farming, precision agronomists and soil scientists have developed methods to quantify spatial variability that exists at the field scale. This has led to the realization that employing average values for managing crop inputs often over-estimates prescription in some parts of the field and under-estimates it in other parts of the field. To avoid these over- and under-estimations, agronomists and farmers are trying to develop site-specific crop management techniques that will enable them to manage the spatial variability that exists in their fields.

Variable-rate seeding

Plant population appears as a legitimate component of site-specific crop management in addressing spatial variability existing in crop fields. There is a growing interest in variable-rate seeding among farmers and practitioners. This, in part, is driven by increasing seed prices. As seed companies introduce additional desirable traits into future crop varieties, the cost of seed will continue to rise. Hence, the technology to vary seed rate, coupled with sound scientific knowledge, will chart the way to make cropping more productive, efficient, and profitable. Some may argue that technology to vary seeding rate has arrived. Others may rightly point out that science to support the decision-making process to gainfully use the current technology is lacking.

Objective

The goal of this study was to experiment with variable-rate application of seed in a field and assess its effect on yield.

Methodology

Location. The study was conducted in Colorado during the 2014 crop growing season (April 2014 to October 2014).

Climate. The climate of north-eastern Colorado is considered semi-arid as it receives less precipitation than potential evapotranspiration. However, 2014 received one inch above the normal level.