Sensing a Need... for VR Seeding Maps in Michigan

It would be an understatement to say that Clark Farms in Eagle, Michigan wears many hats—including hardhats, stocking caps, and seed corn caps. In addition to farming, Clark Farms also operates several other businesses including sand and gravel excavating, snowplowing/lawn care, and transporting propane and anhydrous ammonia. In 2009, Clark Farms founded Looking Glass Seeds and began selling Pioneer seeds. They sensed that prescriptions for varying corn seed rates required better soil maps, so in July 2012 they bought a Veris 3150 EC-OM system.

Looking Glass Seeds mapped 6,500 acres in the fall of 2012. Jamie Rincker, Looking Glass sales rep reports, “The response has been huge; people are asking about our Veris. We’re focusing on completing Clark Farms acres first, but are excited about offering this to our customers in 2013. We believe the combination of Pioneer seeds and Veris EC-OM maps will be extremely beneficial to our growers.”

Clark Farms, led by Pete Clark and his son Jake, is in an area of Michigan with some extremely rocky soil. As a result, they experienced damage to the sapphire window on the OM wear plate. Sensing the need for some farmer engineering, they welded keystock to the wear plate to protect the window. Problem solved. According to Jake, “We’re aware that our conditions are challenging. This isn’t the first innovation we’ve done to our farm equipment to handle rocks and likely it won’t be the last.” (A production version of the rock-plate will be available from Veris factory in 2013.)

As they have done with their Veris EC-OM system, Clark Farms senses and meets the needs of their customers and local conditions, continually adapting and adding to their company.
For Dual Depth EC with ATV/UTV’s
Veris Technologies introduces the new Q2800, with dual depth soil EC capability. It was over a decade ago when Veris launched the world’s first commercial on-the-go soil mapping with the dual depth Soil EC 3100. In 2010 Veris introduced the Quad 1000 for single array EC mapping that could easily be done with an ATV. Due to the customer response and field performance of the Quad 1000, Veris now offers the Q2800, for dual depth EC mapping with ATV/UTV’s.

The Q2800 implement handles tilled fields and moderate crop residue with ease. Its spring-steel tine mounted disks follow ground contours and the 15 inch diameter disks provide good soil contact. This disk spacing allows mapping in emerged 30-40” row crops.

The Q2800 combines the dual depths of the 3100, and the smaller size of the Quad 1000, creating another great member to the Veris sensor family.

Sensing a Need...
For Precise EC, OM, and pH Mapping in Nebraska

Aaron Nelson was already busy mapping with his Veris MSP EC-pH system when he learned about the new OpticMapper. Sensing the need to map organic matter with the same precision as EC and pH, he was eager to add the OpticMapper to his system. Even before the MSP3 was released to production, he convinced Veris to sell him a prototype OM module—converting his EC-pH unit into the first MSP3 system to map commercially.

After college, Aaron worked as a consultant while continuing to help on his family’s farm. He sensed a need for high-quality precision farming consulting, which led him to establish Nelson Precision Agronomics in 2009. His company serves farmers in eastern Nebraska; specializing in crop scouting, Veris mapping, sampling, and aerial photography. “I saw a need in farming that wasn’t being met. Using Veris sensors I began providing precision services that farmers needed and no one was providing.” Aaron’s wife and business partner Liz uses her business degree to keep their data, billing, and record-keeping organized.

Aaron reviews his data quality closely and will re-map a field if it isn’t up to his standards. “I began using Veris sensing because I knew grid sampling and soil surveys weren’t accurate enough. So the soil data I collect must be as good as I know it can be. Customers may not know the difference between good and bad maps, but we do.” As a result of Aaron’s innovative mindset and attention to detail, his clients can be assured they have the best possible maps for variable rate seeding and lime.
Sensing a Need...
For Public-sector R & D in Soil Sensors

If you Google search for on-the-go soil sensors, one name (besides Veris) appears more than any other. While Viacheslav Adamchuk may not be the easiest name to pronounce, it’s easy to see that Dr. Adamchuk—Slava to all who know him—has made an extensive contribution to precision agriculture.

“I first met Slava in 1999 at the InfoAg precision ag conference in W. Lafayette IN,” recalls Eric Lund, Veris Technologies President. “He was in the middle of his Ph.D at Purdue. He came to the Veris booth and showed us some of his early efforts in pH sensing. What struck me most about that first encounter wasn’t his data—which was intriguing but very preliminary—but the unique combination of joy and intensity he had for his project. I told the other Veris guys at our booth that day, ‘I don’t know when or how, but I suspect we’ll be collaborating with this passionate Ukrainian in the future’.”

A year later, Slava had completed his Ph.D and successfully evaluated his on-the-go pH prototype. Veris licensed the technology from Purdue University and developed the Mobile Sensor Platform in late 2003. In 2000, Slava accepted a position as an assistant professor at the University of Nebraska-Lincoln, not far from the Veris factory in Kansas. Collaboration has continued on a formal and informal basis for over 10 years. One of the most important contributions was Slava’s assistance in Veris adopting a rugged metalloid pH electrode, replacing the original glass electrodes on Veris MSP’s.

In 2010, Slava became an associate professor at McGill University in Quebec Canada, maintaining adjunct status with the University of Nebraska-Lincoln. He has around 10 students in his research programs, most focusing on soil sensing. It’s difficult to find a soil-sensing technology that Slava hasn’t researched and published in a scientific journal paper, including soil EC, optical, compaction, moisture sensing, ion-selective electrodes, and more. In 2012, McGill University purchased a Veris P4000, so expect new research on Vis-NIR spectroscopy to be published soon.

What sets Slava’s research apart is his common sense approach to soil sensor R & D. This practical mindset makes his input valuable in commercial agriculture as well; Slava advises a 110,000 ha Ukrainian farm on its precision program, which includes Veris EC mapping of over half of the operation.

Dr. Adamchuk senses a bright future for the industry, “Over the last twenty years, we have witnessed substantial developments in the field of proximal soil sensing, and a greater than ever number of potential applications for this technology is still just above the horizon.”

Veris Technologies conducts extensive field research on each new product. We frequently summarize our research results and submit papers to peer-reviewed scientific journals. In 2012 Veris-submitted papers on the OpticMapper and on the MSP3 were accepted for publication in these highly respected scientific journals: Agronomy Journal, Geoderma, and BioSystems Engineering.

In November 2012, Veris appeared on the cover of Corn and Soybean Digest. The magazine’s feature story was an article on soil sensing that focused on Veris EC, pH, and OM maps. Also, a Crop Insights bulletin about Veris soil sensing was recently published by DuPont-Pioneer. European farmers recently read an extensive article on the Veris MSP3 in Profi, a major farm publication, titled ‘Bodenkarten Mobil Erstellen’ which translates ‘Mobile soil mapping created’.
SOIL MATTERS
...it's at the root of everything you grow.

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Did you know?