

Kelley
Engineering LLC

PRECISION AG SERVICE, EXPERIENCE & SALES

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Frustrated with NOT getting timely support?



Left guessing as what to do or who to call next?



Tired of the blame game & just need someone to make it all work?

Then give us a call.



Whether you have **green, red, yellow, blue**, ISOBUS, AgLeader, Raven, Trimble, Precision Planting, Hiniker, MicroTrak, TeeJet or others - Kelley Engineering can support your precision ag needs.

- **We have been providing quality sales & service to our customers since 1972.**
- We have always answered the phone and always will.
- We bill for what we do. Not for what we may do some day or to start the truck to get there.
- **We want to be your precision ag partner for today's fleet and tomorrow's needs.**

Tech Talk by Eric Post



Is it worth paying for upgraded GPS accuracy?

With the evolution of technology in farming today, there are many times you may ask yourself is worth paying for this or that. Upgrading to a higher accuracy GPS signal may be one of those “things”. Examples of higher accuracy GPS signals would be AgLeader/Novatel’s TerraStar-C & C Pro, John Deere’s SF2 or SF3, Trimble’s RTX & Omnistar products, and cellular or radio RTK.

The obvious question would be, “What are the benefits for paying for better GPS signal?”

The first would be correct spacing from pass to pass. This is going to help with crop yield, weed control, and many other things. It’s most crucial with the first pass - The planter pass. You’re setting yourself up for the rest of the season. When you come back to spray or put on nitrogen you don’t want to be running down your crop.

The easiest benefit to calculate is more accurate shut-off of your operations. Whether that’s clutching on a planter or a sprayer, this is a big factor that can add yield **and** save costs, which go straight to your bottom line.

One underestimated reason for better GPS signal is for reducing operator stress and fatigue. There is a lot going on in your cab and also with the equipment that you are pulling. Higher accuracy and repeatability allows you to focus on the things that truly matter.

Lastly, if you are looking to add or upgrade to your steering options, ask about the overall cost of the system and the cost of those accuracy unlocks. The factory systems may seem easier up front, but the long term overall cost can be higher. As always, we are here to support you and answer any questions you may have.



UPGRADE PROTECTION

Since Spring 2017, we have offered our customers UPGRADE PROTECTION. If you purchase new equipment, we will move all of your existing consoles and modules over to your new equipment and make sure it is ready to go. You only pay for any required parts. **The service call is on us.**

What if I didn’t purchase my consoles & modules from Kelley Engineering?

If you purchase additional equipment or purchase a service plan, you are eligible for UPGRADE PROTECTION. Otherwise, just call us and schedule a service call. We’ll be happy to take care of it and get you ready to go for 2019.

OnTrac3™ Demos

If you are interested in evaluating assisted steering for your operation, we offer the AgLeader® OnTrac3 for demonstration on your tractor. The OnTrac3 is quick and easy to install and it is a great way to familiarize yourself with the AgLeader system.



Even if you are leaning towards hydraulic steering (like AgLeader’s SteerCommand system), an OnTrac3 demo will showcase AgLeader’s ease of operation.



There is no cost involved in the demo, so call today for more information!

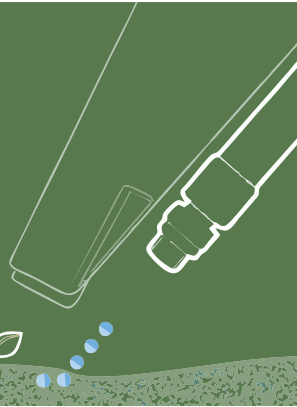
- Quick, easy “Lock-n’-Roll” installation.
- Easily transfer between vehicles.
- Auto-calibration for simple vehicle tuning.
- 9 axis Terrain Comp to handle rolling ground.

In Sync

The seed tube sensor is in sync with Seed-Squirter®. Each seed gets a perfectly timed chemical application.

Your seed lands in a "just right" environment so every plant has the optimal start.

Planting just changed for the better.




It's So Smart, It's Simple

Applying an accurate dose for each seed was never truly possible. **Until Now.**

Seed-Squirter® has changed the reality of planter liquid application. The chemistry you want can now honestly be placed precisely where it's needed.

Your planter can get much better results, it just needs an upgrade.

Look for the test results in the  **BECK'S PFR.**

Here with @BecksHybrids in Atlanta, IN calibrating their #CapstanAG #SeedSquirter system and hit the mark on the first try! #ReadytoPlant



@CapstanAg



Kevin Kelley -

We used this system on our own farm this past year. Basically, we went from a continuous stream to a 2" squirt at the same concentration. It worked great and we reduced our in furrow cost by 2/3 on 30" rows.

- Many options . . .
- Totally Tubular
- FurrowJet
- Hyd & Electric Pumps
- Section Shutoff
- Capstan Ag's N-Ject LF for VRA application
- Variable orifice options for flexibility
- Row by row flow monitoring
- Local Service
- Controllers - FM or Pressure based
- Auto control for Electric pumps
- Clymer Coulter products
- Everything from the fill to the ground - **IN STOCK**
- Price competitive
- Standard Parts
- Installation available
- Compare us to the branded systems



Reduce your in furrow costs by 50% or more with Seed-Squirter!

Application Tips by Harry Javens

Well, we just wrapped up harvest a week or so ago and I hope it went safe & smooth as possible for you as well. We had some wind and down corn, like a lot of you I suspect. Since harvest is fresh in my mind, I decided to write a little bit about that.



Today, we run the Ag Leader InCommand 1200 in our combines. I gotta say, I really enjoy the 1200.

It has a split screen view to see the harvest and our planting or fungicide or whatever we want to compare at the same time. Very handy. Of course, it has automatic variety tracking and easy calibration. Now, I can even do 1 cal load to get really close. We do more, but the convenience is there.

Rocks. I hate rocks, so we mark them on the 1200 and then the guys are able to go find them using their phones. We also mark tile holes and anything else we want to go back and look at.

Display syncing is really nice! We run 2 combines in beans and are now able to autoswath off of the other combine's coverage and see his moisture, yield, speed & yield map. We can share guidance lines or pull up the ones from the planter tractors. The guys at the dryer really like seeing where we are and what the yield and moisture are in real time.

Lastly, if I have a question, Eric or Kevin can view my screen from their phone. A nice time saver when everyone is busy. Very different from that YM2000 I started with in 1996!

As always, we appreciate your business and give us a call if you have any questions or needs for 2019.

Meet the Team



Back: Ethan Zarse, Eric Post, Miles McMIndes, Kevin Kelley
Front: Walt Kelley, Jeff Altman, Harry Javens

Ag Leader®

25+
Years

of leading edge
technology

InCommand Displays The best user experience on the market with the most complete skill set available.



InCommand 1200

SureForce Bi-Directional (uplift and down pressure), hydraulic, individual row, down force control system with pressure relief to prevent row unit damage due to an impact. **You don't have to be the first to be the best!**

SureDrive Built to install on most major planter brands on the market. The high torque electric drive motor isn't tied to a specific brand or type of seed meter, including hard pulling finger meters, making it able to optimize the meter and planter you already have.

SeedCommand Today's high-tech seed isn't cheap. If you're not in proper control of how much seed you plant, how it's planted or where it's planted, you're probably sacrificing yield potential and bottom line performance. SeedCommand is the engine that drives SureForce and SureDrive.

DirectCommand Your crop inputs are valuable. Whether you have an NH3 toolbar, Liquid N sidedress unit, sprayer, spreader or electric starter fertilizer pump on your planter, DirectCommand will transform the application process, allowing for maximum control.



The Complete Package

SteerCommand Combine SteerCommand with GPS 7500 and Ag Leader displays for a high accuracy integrated hydraulic steering system capable of fulfilling any role within your operation.



YOU PICK THE COLOR - WE'LL TAKE CARE OF THE REST



OnTrac3 Steering simplified for tractors, combines, application rigs and more. The economical way to add assisted steering to your operation.

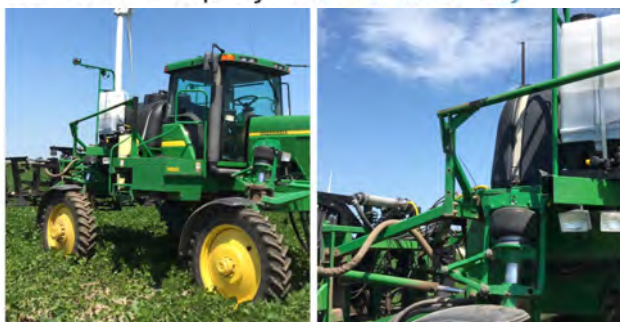
Yield Monitoring Ag Leader studied grain flow dynamics on thousands of calibration loads in order to maintain accuracy but decrease calibration effort required. The result is great yield data - **Quicker and Easier!**

Intellislope Are you getting the most out of your fields? Installing field drainage tile improves soil tilth for better root development, lengthens planting windows and provides better nutrient access for crops by removing excess moisture from the soil profile.

DATA WHEN & WHERE YOU NEED IT

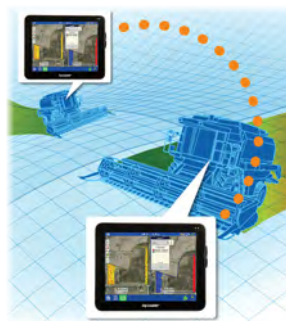


One of Eric's spring projects. Added [@RavenPrecision](#) Sidekick ISO and [@AgLeaderTech](#) Steercommand to new customer's sprayer. [#colorfriendly](#)



DisplayCast™

THE NEXT STEP IN DISPLAY CONNECTIVITY



The next level of AgFiniti and InCommand displays come together to bring you DisplayCast, a feature providing display-to-display communication on your InCommand 1200 and InCommand 800 displays.

GPS 7500 **NEW**

For customers that want high-accuracy, repeatability and faster convergence, the GPS 7500 delivers all this and more. **NEW** TerraStar-C Pro correction service compatible.

- Triple L-band tracking for robust signal and accuracy
- RTK compatible with 400 MHz and 900 MHz RTK Relay Option
- Compatible with NTRIP RTK from InCommand.
- Wi-Fi capability within GPS 7500 allows for base station configuration from a smart phone or tablet.



SteerCommand with DualTrac

Our new dual-antenna solution combines two GPS 7500s with a SteerCommand **NEW** controller to provide high accuracy steering.

- **Low speed steering (down to 0.05 mph)**
- Dual antenna design maintains stable heading even when not moving
- RTK compatible with 400 MHz and 900 MHz RTK Relay Option
- Compatible with NTRIP RTK from InCommand
- Split antenna bracket design is lightweight and dealer-assembled for easier transport

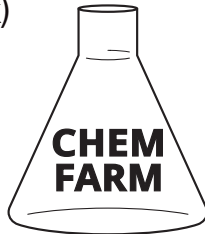


lightweight and dealer-assembled for easier transport

Chem-Farm Tanks

NEW Stainless Steel Tanks

- **10% DISCOUNT IF ORDERED BY JAN 18, 2019**
- Call early to ensure on time delivery
- Brackets available for all sizes
- Tanks Sizes Available (per tank)
 - ☑ 200 gallon set
 - ☑ 250 gallon set
 - ☑ 270 gallon set
 - ☑ 360 gallon set
 - ☑ 520 gallons (single or set)
 - ☑ 720 gallons (single)



A.L. Baucom Family Farms, Inc.
- Monroe, NC

USED Stainless Tanks and Brackets

- Multiple sizes available. Call for current inventory.
- Used brackets and saddles are stripped and powder coated black.
- Parts and stickers in stock. Call for parts availability.



Front Mount Tank Brackets

We have designed & stock front mount tank brackets for the tractors listed below. These brackets can be used with any set of Chem-Farm SS tanks.

10% DISCOUNT IF ORDERED BY JAN 18, 2019

If your tractor is not listed, we can design a bracket to fit your needs. Please contact us early to allow for additional lead time on custom brackets.

- | | |
|------------------------|-------------------------|
| • JD FWA | • CaseIH 4WD |
| • JD 4WD | • CaseIH Quadtrac |
| • JD 9RX & 9RX RowCrop | • CaseIH Rowtrac |
| • CaseIH FWA | • CaseIH Magnum Rowtrac |
| • Challenger | |



Ferrill Farms - Oreana, IL

Poly tanks fit too!

If you would like to use poly tanks instead, our brackets will work for them as well. Any tank with a saddle can be mounted to our bracket and rails.



Diamond J Farms - Bickleton, WA ... *Our bracket, their tanks.*

Agri-Products makes many high quality products including grain cart extensions, multiple tank mount options, NH3 toolbars, in-line rippers, grain handling equipment, and more.

INSIDE TRACK—210 GALLON SADDLE TANKS

Agri-Products has 210 gallon saddle tanks that fit inside the tracks of many 2 track tractors if they are set to 120" spacing. The tractors must also be on 16" or 18" belts.



Evans Farms - Williamsport, IN



Green and Mims Farms - Lynchburg, SC

CHEM-FARM BUILT TO LAST



Hull Brothers - Fort Recovery, OH



Arnold Farms - Hopkinsville, KY

Picture courtesy of bigtractorpower @ YouTube.com

ZIPVALVE

NO MORE CHECK VALVES!

The ZipValve by KZCO is a miniature SS ball valve with Push to Connect fittings. It can be run individually or daisy chained together in sections.



- They eliminate section valves and the dreaded & leaky check valves.
- Use for planter and fertilizer toolbar section shut-off
- They are available in 1/4" and 3/8" standard port valves.
- Cycle Time: 0.2 sec
- Voltage: 12 or 24V, Current Draw: 0.18 amps
- 1/4" Valves: 1.4 gpm @ 1 psi drop, water.
- 3/8" Valves: 5.0 gpm @ 1 psi drop, water.

PRECISION with **PURPOSE**

\$10. \$20. \$30. \$40 or more per acre. If you apply fertilizer with the planter, whether by in furrow or off the row (2x2 for example) or both, do you know your cost per acre?

What if you could reduce your planter fertilizer cost by 50% or more?

What if you could reduce your costs and not reduce your yield?

What if you could save input costs equal to 3 or 4 or 5 or more bushels of corn? Isn't that the same as growing 3-4 bushels more?

Actually, it's better. You know the actual dollars saved. The bill from the fertilizer company for planter fertilizer is 50% or more less. Extra bushels are great, but they must be dried, stored, hauled, and sold. Their final value is unknown.

On our farm, we've been using a standard, continuous stream orifice system for our in furrow application. This year we switched to **Capstan Ag's Seed-Squirter system**. Seed-Squirter only applies fertilizer when a seed drops. Therefore, it also autoswaths & turn compensates the application.

Together with our neighbor, we plant about 3,000 acres of corn. With the inputs saved, we were able to pay for the system TWICE (yes, 2 times) in 1 season. Next year those dollars saved can pay for tile or they may be our profit margin.

Page 3 has a little more information on Seed-Squirter, but, better yet, give us a call or come by to learn more.

We're here to help make your #Plant19 a success!

Added VRA capability to customer's @GreatPlains_Ag Turbo Max w/ Gandy box. Running it w/ @JohnDeere RC 2000. #covercrops #plant17



DID YOU KNOW?

WE OFFER ...

- ✓ DigiFarm VBN Subscriptions
- ✓ Precision Ag Evaluations
- ✓ Custom Cables
- ✓ Pump Repair
- ✓ Heat Exchanger Repair
- ✓ Flow Meter Repair
- ✓ Basic Monitor Testing
- ✓ Monitor Trade or Loan (on most models) in season
- ✓ On-Site Installations
- ✓ Product Demos
- ✓ Training
- ✓ **AND MORE!**

STOCK ...

- ✓ Starter Systems
- ✓ 2x2 Systems
- ✓ Capstan Ag Parts
- ✓ Ag Leader components
- ✓ Hiniker - **Full Ag Line**
- ✓ Raven FMs and Servos
- ✓ Tee-Jet Controller & Precision Ag Line
- ✓ Banjo Quick Couplers, Flange Fittings - Up to 3"
- ✓ Air Line Hose & Fittings
- ✓ Flojet & Shurflo electric pumps
- ✓ Hypro Pumps
- ✓ PTO Pumps
- ✓ Tee-Jet Valves and Valve Manifolds
- ✓ KZ Valves and Valve Manifolds
- ✓ CDS-John Blue flow monitors and parts
- ✓ NH3 Knives - Many Styles and Sizes
- ✓ Liq Fert Knives & Coulters
- Featuring Clark Ag and Clymers. Also, Yetter & Shield Ag are available.
- ✓ Nichols Chisel Points - 7" & 10"
- ✓ Sch 40 & Sch 80 pipe fittings
- ✓ NH3 hose
- ✓ Spray hose
- ✓ Gauges
- ✓ **AND MORE!**

Precision Ag Evaluation



Looking for a direction? Have a mixed fleet? We can help with our precision ag evaluation.

We ask the questions to find out where your operation is at and where you want it to go.

Call us today to schedule your free evaluation and start planning for the future today!

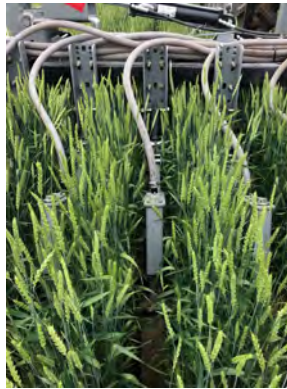
HINIKER® SEEDING SYSTEM

- Multiple Cover Crop System Configurations
- Traditional Broadcast (Solid-Seeding) Applications
- Exclusive Hiniker Interseeding Option
- Digi-Star EZ 400 console - Available as option
- 3 different hopper sizes
- Available in 20-, 30- and 40-cu. ft. sizes
- 20- and 30-cu. ft. hoppers are equipped with 24 seed meters, while 40-cu. ft. sizes have 36 meters.
- Hoppers and metering systems are constructed of corrosion resistant #201 and #304 stainless steel for maximum durability and reliability.
- Metering systems are available with variable rate hydraulic drive or 12 volt variable rate electric drive.

Inter-Seeding System



Inter-Seeding into 15" Wheat



Scarborough Farms - La Crosse, IN
Inter-seeding 15" soybeans into 15" wheat

Bulk Seeding System



**PREMIUM PERFORMANCE
NH3 APPLICATION SYSTEM**

- ✓ **SIMPLE**
- ✓ **NO VAPOR LINES**
- ✓ **ACCURACY & ROW TO ROW DISTRIBUTION WITHOUT A PUMP**
- ✓ Huge range of applications rates are possible
- ✓ PWM solenoid flow and section control
- ✓ Rate changes are virtually instantaneous and precise
- ✓ 3/4" hoses to the row. Cut to length. No more coils!
- ✓ It's like fuel injection for NH3.
- ✓ If 3 rows are ON out the 15, no problem. Your distribution and rate are unaffected. No more balancing distribution against the value of section shut-offs.

CALL FOR MORE INFO



DUO LIFT↑ Gears

The Duo Steer by Duo Lift is a 4-wheel steer unit designed for your strip till bar, planter, field cultivator, side-dress toolbar and more.



The "E-Z lock" system locks the rear axle in the fixed position for road use or steerable position for field use in seconds by the flip of a lever. No disconnecting or connecting of tie rod necessary. This heavy duty trailer can utilize 18.4 x 26 lug tires or super singles. Trailers can be built for 1,600 to 2,600 gallon liquid tanks and dual anhydrous tanks.



NH3 Systems

- We've been selling and supporting NH3 systems for 30+ years.
- Our systems are fully assembled and ready to mount to the toolbar.
- Our systems are compatible with every current console/controller on the market.
- Free phone support with every system.



**5-16
ROWS
FULLY
ASSEMBLED**

**17-25
ROWS
FULLY
ASSEMBLED**



RAVEN

**ALSO
AVAILABLE**

- ✓ Heat Exchanger Repair
- ✓ Custom Cables
- ✓ Flow Meter Repair
- ✓ On-Site Installation
- ✓ NH3 Knives
- ✓ Console Trade Program

HINIKER® VOD

ACCURATE NH3 ROW TO ROW DISTRIBUTION

- Regulates and distributes NH3 from one assembly. Up to 17 Rows.
- Eliminates pressure drop across traditional blade and ball servos.
- Liquid at the point of distribution will maximize row to row accuracy.



WORKS WITH ANY CURRENT CONSOLE/CONTROLLER

HINIKER[®] NITRO-LERT™

The Nitro-Lert system will alert operators to individual blocked manifold outlets, lines or knives. Find problems in the field before they cost you bushels. Call or stop by for details!



FOUND BY NITRO-LERT™



A PIECE OF CORN STALK RIND



SLAG FROM HEAT EXCHANGER CASTINGS FOUND IN MANIFOLD



NH3 KNIFE FOUND TO BE PARTIALLY PLUGGED.

THE TUBE WAS PIERCED WHEN IT WAS WELDED TO THE KNIFE.

AVENGER[™] TRUAG

NH3 Toolbars

31X0 SERIES TOOLBARS - 3 POINT MOUNT

The TruAg 31x0 3pt toolbar is economical and it is stout! It is designed to be expanded from 11 to 13 to 15 knife by simply bolting on another wing section. As your operation expands, so can your toolbar.



FIELD READY AVAILABLE



- ANY CONTROLLER
- NH3 SYSTEMS - CAPSTAN, RAVEN, CONTINENTAL, HINIKER

AVAILABLE IN 11, 13, 15 KNIFE

ROI CALCULATOR



HOW MANY ACRES DOES IT TAKE TO PAY FOR A NITRO-LERT SYSTEM?

Assumptions

- 30 ft 3 pt toolbar
- 1 knife plugged
- \$3.50 Corn
- 50 bu loss per 1 acre of row

Answer

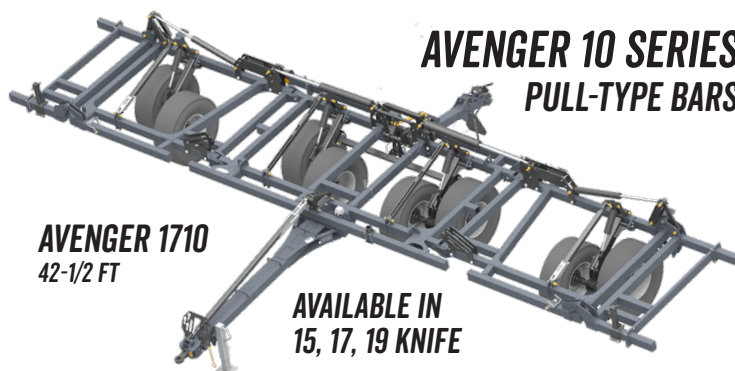
Less than

173 ac

HOW MANY ACRES DO YOU APPLY?

NITRO-LERT SYSTEMS AND SENSORS IN STOCK

AVENGER 10 SERIES PULL-TYPE BARS



AVENGER 1710
42-1/2 FT

AVAILABLE IN 15, 17, 19 KNIFE

SIEMENS MAG 5000 Manure Meters

We now offer Siemens MAG 5000 meters for new or replacement use on manure handling equipment and at a lower price than the KROHNE meters. They are a direct replacement for the KROHNE flow meters typically used. We have customers currently running them with Raven and Ag Leader controls, which means that they will be compatible with any controls.

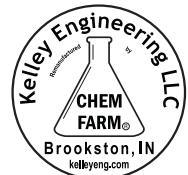


Clark Ag and Clymer Coulters

We offer the full line of Clark Agricultural Equipment and Clymer Coulters for liquid fertilizer and NH3 application. From knives to coulters to notched disc closers, we have it all. Quantity discounts are available for bulk orders.



We Offer and Support . . .



FARM SHOWS

Stop by our display at the upcoming farm shows.

Indiana-Illinois Farm Show

Indianapolis, IN
December 11-13, 2018
Booth # 96

We will also be in the
Hiniker Co. booth.

Fort Wayne Farm Show

Fort Wayne, IN
January 15-17, 2019

We will be next to the
Hiniker Co. booth.

National Farm Show

Louisville, KY
February 13-16, 2019

We will be in the Hiniker
Co. booth.