### SPRING/SUMMER 2011

# Spring/Summer Update

As we look around the nation this summer and see the extreme weather patterns resulting in massive flooding, north central lowa has a lot to be thankful for. As of July 1<sup>st</sup>, we are blessed with a close to perfect crop.

Spring work started on April 7<sup>th</sup> when we freshened up some corn on corn strips with our new design of a vertical tillage strip till machine. This attachment manufactured by Yetter Mfg., is designed to lightly freshen up the fall strips and incorporate starter fertilizer. It made an excellent seedbed for the corn on corn.

Spring planting started out about 15 days late on April 30<sup>th</sup>. We were hesitant to start planting in early April due to last year's experience with a late frost. We planted corn on the Hansen farm first and didn't quit until we were done. Because of the beautiful weather, we planted all the corn within 10 days. Dave kept the planter moving while Gary followed behind spraying Balance Flex, a residue herbicide for the corn acres.

After corn we went right into planting soybeans on May 10<sup>th</sup>. This is about 10 days late compared to our normal planting dates. Once a few rain showers passed, we finished planting beans on May 18<sup>th</sup>. With 70% of our acres being corn this year, we didn't have but a few days of bean planting to do.

Once the corn was off to a good start we applied the 2<sup>nd</sup> application of nitrogen via sidedress. In the fall we apply 100# of N in the strip with this 2<sup>nd</sup> application being in-season. This allows for better management of our applied nitrogen and greatly reduces the risk of losing it via leaching. Side dressing nitrogen with liquid 28% took place the first week of June.

We are currently at an average accumulation of growing degree heat units. Rains have been timely and not too heavy. You do not have to travel too far away from Fort Dodge to find tough looking crops. We are very fortunate in this area.

For many of you the picture below will seem a little strange. Side dressing soybeans... This is not a common practice. Please log on our website to find out the answer to why we are side dressing soybeans. www.nelsonff.com



FAMILY!

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WITH



## Visit our New Website: www.nelsonff.com



As of this past December we are now proudly on the <u>internet</u> with our farming operation. Most of you have searched on the web for a specific product or company that you are looking to do business with. That is where we feel Nelson Family Farms needs to be so you can see what we are all about. In an effort to keep you informed of what we are doing throughout the year, we thought it would be helpful to design this website.

The world of technology is changing so fast each day. Communicating with our business partners is a priority that we have put to the top of our list. Our plan for this website is quite exciting! Take a look and see what you think. We have tried to design it for many levels of inquiries.

Landlords and Farm Managers: We want them to be able to see what is happening on their specific farms. We are currently constructing a password secured site that you can log onto and review your annual fertility maps, planter maps, spray maps, soil sampling results, and much more. (See the tab titled: "Landowner Login") This login site project will take place over the next couple of months.

<u>Inquiring Landowners:</u> As we talk with landowners who inquire about our operation, we want them to see firsthand what our operation is all about. Just like when you do a search on a specific product to purchase, we want you to see what Nelson Family Farms is all about and how we operate.

<u>Other Business Partners</u>: We want our banker, relatives, neighbors, fertilizer dealer, seed dealer, local NRCS, friends to see what we are about.

Our website has been online since December 15<sup>th</sup> and has already had 2733 different visitors. That sounds unrealistic, but it demonstrates to us the power of the internet. You have to think about how anytime someone searches the web from anywhere in the world, our website can get visited. It will be interesting to watch our website visits after a couple weeks of this newsletter. We hope you enjoy watching us and look forward to any feedback or request ideas.

Take a moment and visit our website. The website will be updated often with current events on the farm to better keep you informed. The 2 pages that we specifically enjoy are the PHOTO GALLERY and the NEWSLETTER & ARTICLES. You can now print our previous newsletters from our website. We hope you enjoy it!

Follow us at: www.nelsonff.com



### New Equipment on the Farm



To efficiently harvest acres in a timely manner, properly sized equipment must be utilized. We consider there to be 4 major operations on each acre. Tillage & Fertilizer, Planter, Sprayer, and the Combine. When the crop is mature, it must be taken out. Crop left standing in the field as November weather comes around is not favorable to proper harvest conditions or grain quality. Harvested grain quality and not mudding the crop out is very important to us.

This past fall we upgraded our combine to a John Deere 9860. We had not upgraded combines for 5 years, so it was time for a newer combine. We went from a JD9600 to this larger and newer JD9860. As you can compare between the two pictures, notice the vast size of this new combine. It is the largest combine in terms of capacity that John Deere makes. Having a larger combine means we can harvest with a bigger corn and bean head, and go faster, thus harvesting more acres per hour. For now we will continue to use the 8 row corn head and just drive faster. We did however upgrade to a 35' bean head.

We hope that you can find time to come out and ride! Come find us next fall. Gary or Dave are usually combining beans but our girls do all the corn combining. Karma and Fonda are our professional combine operators.





**Projects on the Farm** 

This past winter our project was the repainting of our John Deere 4960. Being a 1994 model, this tractor needed a little facelift. It was in good overall condition, but the paint was becoming a little faded. As you can see in the pictures we had 3 different colors to paint. We painted the

black first, green second, yellow last. After 5 rolls of painters tape, 1 gallon of yellow paint, and 2 gallons of green paint we got it looking like new.

While we had the tractor torn down we also took the opportunity to do a little mechanical work. We put on a remanufactured turbo, new fuel injectors, and went through the inside of the motor. This tractor is like new. It was hard to take it to the field the first time and get it dirty.





## Apple Co-Founder Compares No-Till Farming to Computer Industry

This is a copy of an article that one of our landlords sent to us this past winter.

By Katie Micik

#### DTN Staff Reporter

SALINA, Kan. (DTN) -- One of the pioneers of the personal computer told a group of no-till farmers that big innovations often aren't made by big companies. Instead they're made by small groups of people who share a passion about an idea and are willing to work to make it happen.

"Corporate culture sometimes keeps you from spawning the newer, better thing," said Steve Wozniak, co-founder of Apple Computer, Inc., and creator of the Apple 1 and Apple 2 personal computers. "The ways you've done things in the past is what I'm calling corporate culture, and it keeps you from spawning the new wave. I suspect that no-tillage is going to hit a knee and curve and just become the dominant method of farming. It will happen. All of a sudden it will be like a fad among farmers."

Wozniak spoke to an auditorium packed with farmers at the 15th Annual No-Till on the Plains winter conference. The computer leader, who has no experience farming but whose wife's family farms in Kansas, drew many parallels between the birth of the computer industry and the birth of no-till farming methods during his question-and-answer session with No-Till on the Plains executive director Brian Lindley. Persistence, creativity and planning are characteristics that innovators share, Wozniak said.

"He's a visionary, I hope he's right," Lindley said about Wozniak's prediction that no-till farming will grow in popularity. Lindley said it was clear during preconference conversations that Wozniak did a lot of research into the no-till methods of farming, but Lindley said he worried about how Wozniak's talk would be perceived.

"Talk about out of the box -- who would have put this together?" Lindley said. "I really was pleased with the way he tied it together with the relationship of being a pioneer in an industry. We have guys out here that are truly, that have that pioneer spirit. We are still not the mainstream. We do believe that one of these days we will be."

No-till farming systems have become especially popular in High Plains regions because the methods conserve water and nutrients in the soil, help control soil erosion from wind and rain, and reduce trips across the field. The annual no-till meeting features two days of farmers and soil experts sharing ideas and results of new farming methods.

Wozniak said he dreamed of computers, designing them in his bedroom at night as a teenager. At the time, an Introduction to Computers class was a graduate-level college course. He gleaned information from articles he found here and there, but there was no central resource.

"When you couldn't find a book or any information on this new thing called computers -- like no-till farming in a lot of ways -- it was further out than rocket science," he said. Some NTOP conference attendees who spoke to DTN after the Wozniak speech said they have been experimenting with no-till methods since the early '70s -- well before there was enough research to fill a two-day conference.

Wozniak said his computer designs felt like a secret that none of his teachers or friends would understand. He told the audience that he used to think "this will be the most important, fun pastime in my life. The thing you do to pass time is not what you're ever going to do for a job."

He said he never showed his computer designs to his father, an engineer who helped form Wozniak's thinking. He did show his dad other diagrams, like a design for an intercom system that connected his home to his friend's a few doors down.

"His answer usually was, yeah, but you can't make a business out of it because it would never pay if you had to pay yourself a salary." The audience laughed. That's why he and Apple co-founder Steve Jobs worked on their original computer designs on their own time, Wozniak said.

Wozniak couldn't afford to buy the parts to make his dreams a reality in the early years, and he credits that for his success. He would hear a description of a computer and have it designed on paper within a few days.

"I got very, very skilled at that because I loved it. I wanted to. When you want to do something, you try over and over. And maybe it's on paper, that's like thinking about it in your head. Think it out. Think it out."

A short supply of resources, naysayers who doubt an idea will work and technical difficulties such as not finding the necessary parts are common plights of innovators, but Wozniak said creativity and a different way of thinking can overcome those challenges.

"And in the end, it's still got to eventually be less costly in some way." He said big businesses often look at innovative ideas and say, "if it's roughly the same cost to do business two different ways, why would we change? We aren't the risk takers. All my friends in technology are the risk takers -- Yahoo



### Apple Co-Founder continued...

Lindley said some of the best no-till farmers he knows don't have farming backgrounds, which strips away preconceived notions, making it easier to try new things.

"It's like when Wozniak invented (his) computer, there were no limitations," Lindley said. "It was a wide open slate. All he had to do was pick the components to make it work. That's what the really good no-tillers are doing. They're taking the components, putting them together and making them work."

The takeaway message, Lindley said, is to foster creativity on your farming operation and continually work to make things happen.

"Develop your industry," Lindley said of the messages in Wozniak's speech. "Make it work, but don't be afraid to try things even if they fail. Just try them. Plan them out, be as absolutely calculated as you can."

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"You're being kind to the soil to keep its nutrients and give it more, letting it do more with what it has." "More for less is what my whole life in Apple was all about." steve Wozniakt





### STRIP TILL Corn on Corn: Striving for Perfection

The growing worldwide demand for both Food and Fuel has greatly strengthened our corn market in recent years. This fight for our corn crop is going to continue as our country attempts to both feed itself as well replace foreign oil with ethanol. Using our corn for both Food and Fuel is good for both the consumer and the farmer/ landowner. For us at the farm gate, it allows for a stronger corn price at our markets. This has increased the number of corn acres planted over soybeans due to the profit potential being greater with corn.

On our farm we have made it our goal to perfect raising corn on corn with no loss of yield. Raising the same crop back on the same acre year after year presents many challenges. Corn on Corn is especially complicated due to the vass amount of crop residue left from the harvested plant. Needing to accelerate the breakdown of this residue is the primary concern. The most common way of dealing with residue in our area is to bury it with intensive tillage making for many trips across the field. When the residue is buried it does not decompose due to the lack of oxygen and microbial activity. Think of it in this way: Where does a wooden fence post rot off first? Underground or at the soil surface? Answer: It rots off first at the soil surface due to the microbial activity and oxygen present at the surface. The same principal will apply in our strip till. We manage the residue on the soil surface promoting the accelerated breakdown of the corn residue. This leaves us with a pure black strip of dirt for the corn plant to germinate and grow. Another thing that happens when you bury the residue and corn cobs is the mixture of residue you create in the seedbed. When you mix in the residue does not decompose underground, then next spring you place a corn seed next to it.... You have just created a tough environment for that seedling to germinate. In strip till we have the pure black strip of fertilized soil with the residue left on the soil surface in between the rows. We are in our 2<sup>nd</sup> year of corn on corn in one field and we are seeing great results.

Proper strip till equipment is also very important to handle the amount of residue. We are continually modifying our strip tillage system to give us the best performance and best soil conditions. This spring we proto-typed the latest version of the Yetter Maverick strip till row unit with the vertical tillage attachment. This row unit allows for a knife strip till pass in the fall, then being able to switch it to a light vertical tillage pass in the fall. You can see in pictures below how it freshens up the fall strips and makes for a near perfect seedbed. In this pass we are also incorporating a 3rd application of nitrogen. We believe in feeding the corn in split applications of nitrogen so the corn plant can utilize every bit of nitrogen that we apply.

Our corn on corn acres look awesome! If you did not know they were corn on corn fields, you could not tell from the road. Near perfect stand and very even plant height! Look for more corn on corn acres on our farm in the years to come.



Above: Our Blu-Jet/Montag strip till machine applying Nitrogen, Potassium, Phosphorus, and N-Serve in the fall.



Above: The fall strip till pass is 8-10" deep. The residue is moved to the side and a 3-4" tall berm is made for the strip.



## STRIP TILL Corn on Corn Continued.....

<u>Below</u>: The Yetter Maverick units mounted to our refurbished JD 1780 planter frame.



<u>Below</u>: This is a dig out of the strip after the spring pass to freshen up and apply nitrogen. Pure Black dirt to plant into.



<u>Below</u>: Emerging corn in the strip. Residue well on its way breaking down and decomposing.



<u>Below</u>: A close up view of the Yetter Maverick Row unit with the Vertical Tillage (wavy) blades. We helped Yetter Proto this unit.



<u>Below</u>: Planting into Strip Till Corn on Corn. A Very mellow and consistent seed bed.



<u>Below</u>: Side dressing liquid 28% on the Corn on Corn acres. This is the 3rd application of Nitrogen to our corn on corn .







### **Predictive Power for Higher Yields**

Our farm is continually looking to step ahead of the norm to test and integrate the latest technologies in farming. Precision Ag is known to be the term for things like GPS controlled auto steer systems or a yield monitor. If you look at where we have come in the precision farming technology a yield monitor is like what a DVD player is to the world of entertainment. A DVD player is just standard equipment you can buy for pennies on the dollar. There are many manufacturers of the DVD player. They all do the exact same thing, they are identical, just a different shape, sizes or color of box.

The world of technology in agriculture is very exciting right now. Precision Ag on our farm is taking on a whole new meaning than what it did just 1 year ago. We have all the standard equipment like the auto steer, yield monitor, sprayer boom section control, and etc. This year we have looked deeper into what technology is available to make our farm that much more profitable and sustainable. Precision Ag has a whole new meaning to us.

SlingShot Technology is a system that we will have installed in all of our tractors and combine this year. Manufactured by Raven Industries, the Slingshot technology is a cellular based telematics that delivers unrivaled connectivity

through mobile networks to allow for a wireless ZERO line of sight RTK correction signal, in cab high speed internet, instant data transfer to and from the tractor, and remote hardware support. I can sit at my desk and view where each tractor is operating, what it is applying, at what rate, at what speed, and etc. It is very similar to the Fleet Management tracking devises that you see on semis. If my machine is not operating correctly I can allow our precision ag manager connect into my screen and diagnose and change the settings on the machine. My agronomist can send my prescription maps to me instantaneously via the internet. This Sling-Shot technology is just one example of where our farm has stepped ahead of the norm to increase productivity and profitability.

The Raven IndiRow planter system is another area that we implemented this year for our planter. We now have 24 hydraulic motors on our planter, one motor per row. Each motor is controlled independently and can run at its own <u>Above</u>: It looks complicated, but with all the technology we have on our equipment, many antennas and receivers are needed.



speed. So now as we are planting variable rate corn populations, if the outside 2 rows are into a different management zone calling for a different population those 2 rows will change population instantaneous to that different rate. If we have the planter split up into 3 different varieties, we can set the population different for each of the 3 varieties. No longer are we macro managing our farm. We now MICRO MANAGE every step and input. From the fertilizer we apply to the seeds of corn that we plant, we have a prescription for each component.

What is next? What will be here in 5 years is something that we could not imagine possible from where we are to-



acting that we could not imagine possible from where we are today. Will our planter carry 2 different varieties and plant them each according to the management zone and soil type that allows for maximum yield? Will we be able to predict our yields even before we plant the corn? The technology is there and being tested. Nelson Family Farm is committed to helping take your farm to the most productive level that each soil type is capable of producing.

<u>Left:</u> Our planter tractor is busy with monitors and controllers, but they all have a very specific purpose and benefit.

<u>Background</u>: This is a Green BioMass satellite image of the Haire North farm, taken in July of 2010. This type of technology is something very high level but we feel it is very relevant to where our farm is going!



### Featured Farm Family by Farm Journal Magazine



In April our family was honored with the Farm Family of the Week recognition by Farm Journal Magazine. Anna-Lisa Giannini of the Farm Journal publication interviewed us for this award. We were featured on their website (<u>www.agweb.com</u>) in the month of April. It was an honor to be recognized by a national farm media publication with such an award!





### **Renew Rural Iowa Entrepreneur Award**



<u>Brokaw Supply Company</u>, a family-owned business offering parts, service and precision ag machinery to Midwest farmers, is the lowa Farm Bureau Federation's (IFBF) Renew Rural lowa Entrepreneur of the Month award winner.

Owned by Dave Nelson and his father, Gary, Fort Dodge-based Brokaw Supply Company sells fertilizer applicators, bulk seed equipment and sprayers. While the Nelsons have operated Brokaw Supply Company for three years, their work history goes back decades to the days of working side-by-side on the family farm. "Dave grew up on the farm," explains Gary. "He's my best friend and now my business partner."

Dave always wanted to farm with his dad and never strayed from that plan while attending college and working in various ag industries. "As a farm kid, if it (farming) is in your blood, you've got it in your blood," says Dave. "You want to farm with your dad."

But the two didn't simply farm together, they made the most of an opportunity to co-own and operate a business that offers important services to area farmers. Their sales region now spans the Midwest and the business has grown rapidly from six employees to 25 full -time employees. They're known for testing equipment on their own farm prior to selling it at their store.

"They have a huge economic impact on the region...," said Larry Alliger, a farmer and president of the Webster County Farm Bureau.

Renew Rural Iowa (RRI) is an IFBF initiative that supports new and existing businesses through business education, mentoring and financial resources. In cooperation with five community colleges, RRI is coordinating a series of free, one-day, innovation seminars this summer to introduce Iowa's key economic development partners and tools. To register and learn more, go to <a href="http://www.renewruraliowa.com">www.renewruraliowa.com</a>.



Above:The Renew Rural lowa award was presented by lowaAbove:Webster County Farm Bureau President, Larry AlligerFarm Bureau and Bob Quinn of WHO Radio.joined us for the award presentation.

This spring the Iowa Farm Bureau and WHO Radio chose Brokaw Supply to be the recipient of their Renew Rural Iowa Entrepreneur Award. This award was given to in recognition of our continued success that Brokaw Supply has been experiencing. We are very honored to also receive this award.

Our employees are what have taken Brokaw to this new level of business. Without them, we could not continue our growth into this Ag market. In 2008 when we purchased Brokaw Supply there were 6 employees. Today we are at 26 with 3 current job openings. Brokaw has been a great compliment to our farming operation. With a leadership team of a General manager, accountant, and 3 department managers Brokaw Supply continues its growth into 2011.

Visit Brokaw Supply on the web: www.brokawsupply.com



# Going Green with COVER CROPS

The rye grass cover crop on our farm has been a success so far. If you remember last newsletter we shared how we are doing 2 field size trials of a ryegrass cover crop. The purpose of a cover crop is many times thought to be for reducing soil runoff or a water conservation. In northern lowa we are not concerned with either of those issues. The benefits of a cover crop to us are:

- <u>Organic Matter</u> dead and decaying plant mass is organic matter. Organic matter helps improve soil structure and fertility utilization. The dead plant mass from the ryegrass provides additional organic matter to our soils.
- <u>Nitrogen</u> –Cover crops acts as a nitrogen scavenger of any leftover nitrogen in the soil. The cover crop grows, takes up any extra nitrogen in the soil. By the roots of the cover crop taking up the nitrogen, it prevents it from leaching out of the soil. This providing this leftover nitrogen to next year's crop and also keeps nitrates out of our rivers and streams.
- <u>Compaction & Soil Structure</u> I have described the perfect seed bed soil structure to be that of a virgin fencerow or potting soil. Planting a thick rooted ryegrass helps improve soil structure and health. The massive amount of roots break up any compacted soils and helps bring back a healthy soil structure that promotes water filtration and healthy root growth.

We planted a total of 70 acres to cover crop this past fall. 35 acres on the Iowa Learning Farm and 35 acres on the VanDiest Farm. It will be a great field scale trial to see if there is any value to a cover crop. We are excited to keep this trial going due to the need for multiple years for data to show the true results and any benefits.





#### **Photo Journal**



Left: Dave, Gary, and Karma attended TEPAP seminar in Texas this past winter.

<u>Right</u>: Gary and Karma spent 2 months enjoying the winter weather in Arizona.

<u>Lower Left:</u> Tyson is the youngest Mini-bull rider in the USA.



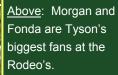


<u>Right</u>: Tyson was invited to the World Finals of Mini bull riding in Lincoln, NE.

<u>Below</u>: Morgan is taking riding lessons so she can start junior barrel racing this next summer. Yee Haw!











100 m

Left: Tyson helps dad in the shop but sometimes gets stuck in the bucket...



<u>Left</u>: If you see Dave on the farm, chances Tyson is not too far behind.

Right: Morgan gets to be farmgirl in the shop too.





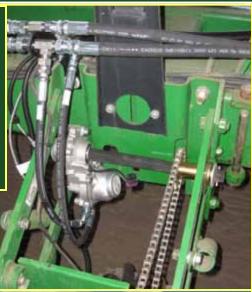
### **Photo Journal**



Left: Brother in Law Steve helps install the Raven IndiRow System on the planter.

<u>Right</u>: The IndiRow system uses a single hydraulic motor and short shaft on each row unit.

Below middle: Gary







Left: Gary applying spring NH3 to the Moran Farm that we rented this past year.

<u>Right</u>: Cleaning up the fence lines and roadways on the Hogan 3 Farm.

Left: Assembling the Yetter Maverick Strip Till bar in the shop at Brokaw.





Left: A perfect seed bed for corn on corn.

<u>Right</u>: Overhead pic of the Yetter Maverick with VTA.



<u>Above</u>: Running at 10mph with the Yetter Maverick/VTA we were doing over 40 acres per hour with our 12 row. We are very happy with the seedbed and planting conditions that this Maverick unit creates.



### **Photo Journal**



Left: Planting corn on corn on the VanDiest Farm.



<u>Above Right:</u> Refurbishing and getting ready for paint on this 375 Peterbuilt to be our new fertilizer tender.

Below: Gary Variablre rate sidedressing corn on Haire



<u>Above</u>: Comparing closing wheels on the planter this spring. Dawn Curvetine on left and Yetter's on right.

<u>Below</u>: See the individual row shut off capability from the Raven IndiRow system on our planter.

<u>Right</u>: On our Blu-Jet Sidedresser we use the Capstan variable rate injection system. From 5 gpa to 70 gpa with no changing of the orfices.



<u>Below</u>: Looking down the whirl of a corn plant.

<u>Lower Right</u> See the pure black strips of dirt the corn is planted in







## Photo Journal



Above: Gary fills the sprayer to spray beans.

Middle Right: One of the many benefits to Strip till

<u>Right</u>: Fixing tile on the Hogan 3 farm before we planted soybeans.



<u>Below</u>: One of our Variable Rate Prescription maps for corn. This is the Moran farm. Our seeding rates are from 28 to 38,000 seeds per acre.

<u>Below</u>: Always rocks to be picked up.

<u>Right</u>: Filling the planter on the Haire Farm

is a huge reduction in fuel costs.







# **OUR FAMILY DOING BUSINESS WITH YOUR FAMILY!**

With your involvement, our Family Farming Operation continues to grow! As the fall of 2011 quickly approaches, we would like to thank all of our farming & business partners. Without your help and assistance we would not be where we are today!

If you or anyone you know is looking for a long term tenant, we would be excited to share more details about our Family Operation. We pride ourselves in the relationship and open communication with everyone that we do business with. If you have any questions, comments, or suggestions, please feel free to contact us! - The Nelsow's



Our Century Farm Since 1889



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Leadership is the Challenge to be Something More than Average... Jim Rohn



### OUR FAMILY DOING BUSINESS WITH YOUR FAMILY...