# Saturday Jan 24th – Depart Adelaide

USA Tour 2015

# USA Tour 2015

# Monday Jan 26th – Attend Crop Health Workshop, Salina, Kansas

USA Tour 2015

# What did we learn at the crop health workshop?

1. Sulphur nutrient deficiencies show up more in no-till soils & foliar zinc products need to be at the highest quality.
2. For maximum yield, you need strong seedlings from the outset, and this is especially important for mitigating other stresses later in the crop's life cycle
3. Cover crops- grow more residue, keep more residue. Stubble makes stubble
4. Add diversity of plants, keep the residue standing
5. Be alert to changes in your no-till systems, don't assume problems will go away on their own

USA Tour 2015

SANTFA

# USA Tour 2015

# USA Tour 2015

Tuesday Jan 27th – Wednesday 28th
Attend No-till on the Plains Conference

USA Tour 2015

SANTFA

What did we learn at the no-till on the plains conference?

1. Paul Jasa, don't shift the soil, don't shift the residue, keep residue standing
2. Robin and Kelly Griffeth, mixing cover crops under their sunflower crops for added diversity and also adding ground cover. Only loosing 10-15% of normal yields by drilling their sunflowers rather than precision planting
3. John Heerman, must keep ground covered, no-till, and no fallow, focus on the soil health, stripper stubble to catch extra snow, winter wheat drilled into 5 ft. tall summer cover crop

SANTFA

4. Randy Small, relay cropping, planting soybeans into a standing wheat crop. Wheat crop is sown on 15 inch, with tramlines, then when the wheat is before jointing, plants soybeans into the wheat on 30-inch rows. He harvests the wheat and the soybeans are 5-10 inches high growing between wheat rows

5. Dr. Wendy Taheri, arbuscular mycorrhyzal fungi. Fertilizer to soil is like swapping your lungs for an oxygen tank. AMF gather the nutrients, and swap the plant for sugars it releases from its roots system, this is why living covers are needed to keep AMF alive. Fertilizers makes plants lazy and not give up sugars to feed AMF. AMF is like a spider web through the soil, all connected, so when tillage occurs you ruin the web of

# USA Tour 2015

SANTFA

# USA Tour 2015

SANTFA

# USA Tour 2015

# Wednesday Jan 28th – Visit Flourmill

USA Tour 2015

SANTFA

# What did we see at the flourmill?

1. Farmer owned, looking into specialty markets
2. Specialized flour grinding stones
3. Automated bag filling
4. Automated pallet stacking

SANTFA

# USA Tour 2015

# USA Tour 2015

What did we learn at the flourmill?

1. Don’t need huge tons to produce a high quality product
2. The trials and tribulations of running a flour mill (pests, bugs, break downs, changing from conventional to organic, food hygiene
3. Famers can do anything if they join together and work productively together

SANTFA

# Thursday Jan 29th – Attend AIM Symposium

USA Tour 2015

SANTFA

What did we learn at the no-till on the plains AIM symposium?

1. Fred Portenza, plants give out different chemicals to taste different to different animals.
2. FP, linking palates and landscapes together. Linking form, function and behaviour. Palatability is more than taste. Microbes and cells influence the food we eat. Compounds playing major roles in unconscious food decision-making.
3. FP, Animals can self medicate with selective grazing of different plants. Underground animals need diversity of food too.

SANTFA

What did we learn at the no-till on the plains AIM symposium?

1. Jim Gerrish, don't be afraid of stock hurting your soil, they need to be managed right, there are lots of different grazing techniques, find what is best for you, your soil, and your cows
2. JG, dead plants are not solar panels, only green leaves make photosynthesis. Have no fear of wasting grass, shift your livestock early.
3. JG, grass feeds grass, grass feeds the soil, and grass feeds the livestock.
4. JG, we have a broken water cycle. Lack of ground cover, means diminished root growth, means organic matter drops, increased compaction, decreased water infiltration, poor water use efficiency, that leads to water run off and saline seeps.

USA Tour 2015

SANTFA

What did we learn at the no-till on the plains AIM symposium?

1. Jerry Hatfield, Agriculture is to not rocket science, agriculture is more complex, and rocket science is easy!
2. JH, cover crops are an active passive blanket for your soil, don't remove any residue. The CO2 that is released from the soil and stubble should never make it out the crop canopy. The greener the plant for longer means higher the yield.
3. JH, understand your soil, understand your plants. 55% of the crop insurance claims in the Midwest alone were from flood and drought. 12 billion dollars since 1989, 20 billion dollars of insurance all up. Imagine if 12 billion dollars was spent on improving soil health

SANTFA

What did we learn at the no-till on the plains AIM symposium?

1. Wendy Taheri, we are loosing 25,000 acres of cropland every year. Reduce your phosphorus levels to increase your AMF numbers. AMF can reproduce from fragments of itself.
2. WT, we are 3-5 years away from having AMF in our seed treatments
3. WT, it's the arrogance of humans, to think that we need to work the soil.

SANTFA

# USA Tour 2015

SANTFA

# Friday Jan 30th –
# Visit Veris Technology factory

USA Tour 2015

SANTFA

# Tour of Veris technology factory with Tyler Lund

USA Tour 2015

# Friday Jan 30th –
# Farm Tour Dietrich & Terry Kastens

USA Tour 2015

SANTFA

Farm tour – Dietrich (son) & Terry (father) Kastens at Attwood

What did we see at the Kastens?

1. Both Terry and Diet are highly passionate about farm economics
2. Brilliant, huge on farm storage system, helping to make better grain sales decisions
3. Starting to get into drones for weed, stress, water, nutrient mapping

SANTFA

# USA Tour 2015

# USA Tour 2015

What did we learn at the Kastens?

1. Zero-till is key in low rainfall, windy areas
2. High stubble loads can get them through a drought
3. Questioning cover crops due to water use and seeding costs

SANTFA

Saturday Jan 31st –
Farm Tour Homestead Farms –
Nathan & Matt Pearce

USA Tour 2015

Farm tour – Nathan & Matthew Pearce (Brothers)
(Homestead Farms)

What did we see at Pearce's?

1. Two young brothers running a very tidy farm over 15,000 acres
2. Running new machinery to minimize break downs and maintenance
3. Bringing cattle back onto farm, making money from cover crops

SANTFA

# USA Tour 2015

# USA Tour 2015

# USA Tour 2015

What did we learn at Pearce's?

1. Be careful not to graze cover crops too hard
2. First ones to pay cash rent in their district, and be good farmers on leased land
3. Rocky Mountain Oysters!!

SANTFA

Saturday Jan 31st –
Farm Tour Curt Sayles, Seibert, Colorado

USA Tour 2015

SANTFA

# Farm Tour – Curt Sayles, Seibert, Colorado

What did we see at Curt's?

1. Great long term zero-tiller in 14-18 inch rainfall
2. Starting to use cover crops and integrate cattle
3. Don't need the best machinery, just have right machinery for the job

SANTFA

USA Tour 2015

# USA Tour 2015

# USA Tour 2015

What did we learn at Curt's?

1. Son in law is a cowboy, so changing operation to introduce cover crops and cattle. Changing to suit his passion
2. Just because the farming practice is not done in your area, doesn't mean it cant be done
3. Always have a good shovel on the back of your ute

SANTFA

Sunday Feb 1st –
Farm Tour John Heermann, Holyoke, Kansas

USA Tour 2015

SANTFA

# Farm Tour – John Heermann, Holyoke, Kansas

What did we see at John's?

1. Fantastic young zero-tiller on 1600 acres
2. Huge summer cover crops
3. Cattle on lease to strip graze covers

# USA Tour 2015

# USA Tour 2015

# USA Tour 2015

What did we learn at John's?

1. You can quickly turn a full tillage farm into zero-till with passion and the right information
2. Don't be afraid to try strips, have on farm trials
3. Snow is cold, so is the wind!!

SANTFA

Sunday Feb 1st –
Factory Tour - Schaffert Manufacturing, Indianola, Nebraska.
Paul Schaffert

SANTFA

Factory Tour - Schaffert Manufacturing, Indianola, Nebraska.  Paul Schaffert

What did we see?

1. Drill and planter attachments
2. Liquid systems, closing wheels, seed bounce reducers, fertilizer discs
3. Second hand equipment and sales

SANTFA

# USA Tour 2015

Factory Tour - Schaffert Manufacturing, Indianola, Nebraska.  Paul Schaffert

What did you learn?

1. Lots of different plastic options for seed firmers for planters
2. Different closing options for planters and drills

SANTFA

Monday Feb 2nd –
Farm visit – Green Cover Seeds –
Brian Berns

USA Tour 2015

SANTFA

Farm tour, we met Keith Brian and Berns Green cover seeds

What did we see at Green Cover Seeds with Brian Berns?

1. Self made company, started by Keith and Brian Burns
2. Seed shed, all the different types of cover crop seeds
3. Cleaning, mixing and bagging facilities needed for a cover crop company

SANTFA

# USA Tour 2015

# USA Tour 2015

# USA Tour 2015

What did we learn at Green Cover Seeds with Brian Berns?

1. Cover crops are big business, have expanded quickly too meet the market
2. Diversity, think about what you what to gain from cover, ground cover, grazing, adding free nitrogen
3. Don’t forget what makes you the bread and butter - farming

SANTFA

Tuesday 3rd – Wednesday 4th Feb
Attend the High Plains No-till Conference
Colorado Conservation Tillage Assoc.

USA Tour 2015

SANTFA

What did we learn at the High plains no-till conference?

1. Kris Nichols, we can't get to organic no-till with the right crop rotations and cover crops. We cannot compete against Mother Nature; she is always one step ahead of us. If you loose your topsoil, you loose your ability to grow food. Don't disturb the soil. Accept the weeds that don't really matter. Don't be afraid if the field doesn't look "sexy"
2. KN, tillage is the absolute last resort, chemicals should be viewed the same way. Crop rotation and crop completion is the number 1 weed control.
3. KN, your in the drivers seat, its your farm- innovative, think, change, adapt, create your own cook book
4. KN, its not just about your yield, its about your bank balance and lifestyle. Avoid broad-spectrum insecticides. You pick the weed – cover crops. You pick the plant – cover crops. Use your mulch and residue to manage weeds.
5. KN, there is only one problem in Ag, poor management of carbon.

SANTFA

What did we learn at the High plains no-till conference?

1. Steve Siemens- Motivational speaker. When you're through changing, you're through. Change is here to stay. When you change your thinking you change your beliefs. When you change your beliefs, you change your expectations. When you change your expectations, you change your attitude. When you change your attitude, you change your behaviour. When you change your behaviour, you change your performance. When your change your performance your change your life.
2. SS, 87% of people believe going to work, would be as bad as going to jail.

USA Tour 2015

SANTFA

What did we learn at the High plains no-till conference?

1. Dr. Elaine Ingham, don't put any more than 100kgs, of fertilizer, lime or gypsum to the hectare, the salt take water away from the microbes.
2. EI, weeds require disturbance. Tillage destroys nutrient cycling. Don't use Nitrogen inhibitors, it kills micros. Fungi keep the soil between pH 5.5-7.0. Bacteria make alkaline glues, more the bacteria the higher the pH. Higher the pH more free nitrogen. Thistles (weeds) need more than 50ppm of nitrogen to germinate, wheat and corn only need 3 ppm of NO3 and 3 ppm of NO4 to germinate seeds.
3. EI, the plant will determine its own pH level. If it wants for acid, it will give more food to the AMF. If it want more alkaline it will feed more food to the bacteria. To root systems of plants have thousands of different pH levels along their roots systems to pick up different nutrients. The higher the fungal activity, the better the soils productivity. When grazing, the plants release a lot more sugars and root exudates to swap the fungi for nutrients so the plant can regrow the top growth.

# USA Tour 2015

SANTFA

USA Tour 2015

# USA Tour 2015

Thursday 5th Feb –
Farm Tour – Scott & Becky Ravenkamp, Hugo, Kansas

USA Tour 2015

SANTFA

# Farm Tour – Scott & Becky RavenKamp

What did we see at Scott & Becky RavenKamp?

1. 12-14 inch rainfall at Hugo Colorado, always windy
2. Stripper header for extra residue height
3. High residue crop rotation, growing cereal rye, rye grass, triticale for cover crops

SANTFA

# USA Tour 2015

978-RPX

C1
D1

What did we learn at Scott RavenKamp?

1. Residue is king, more residue all the time
2. Winter covers, grazed, then back into summer covers, grazed again
3. Keep the ground 100% covered, 100% of the time

SANTFA

# Back in Adelaide Sunday 8th Feb

USA Tour 2015