Brent Larson

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Growing Non-GMO Corn & Soybeans

- Farm in Northcentral Iowa near Fort Dodge
  - Strip-till corn and no-till soybeans, mostly non-GMO

- Questioned value of traits

- Favorable yield reports from non-GMO
  - Drainage
  - Fertility, healthy crops have fewer issues
  - Hybrid placement
  - Scouting for rootworm & corn borer issues

- GMO traits as a tool

- “IP” or “Identity Preserved” Market, or Organic

- Corn Herbicides
  - Glyphosate & Verdict before corn emerges
  - Armezon Pro before corn canopies

- Soybean Herbicides
  - Clethodim & Zidua Pro before soybeans emerge
  - Flexstar & First Rate before soybeans canopy
Strip-Till Rig
Modified Sukup 9400 High-Residue Cultivator
JD 1760 Planter Setup

• 400 gallon liquid system to put liquid fertilizer in the furrow under the seed
  • Mounted on the planter
  • Ground driven pump, about 10 gallons per acre

• 550 gallon liquid system to put liquid fertilizer in a band behind the planter in a 2 x 0 x 2 setup. 2” to the side of the row, on the surface, on both sides of the row
  • Stainless steel tanks are on the tractor
  • Hydraulic pump, Raven 440 controller, 15 – 50 gallons/acre
JD 750 Drill, 20’ wide, 7.5” spacing
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Sunderman FM
Using Non GMO grains to Increase profit on Conventional Acres and as a tool to Transition to Organic

A & W Farms
Caleb Akin and Noah Wendt
Summary

• Our Journey with Non GMO grain production
• How
  • Production and marketing
• Budget
• Challenges/Opportunities
• The future of Non GMO on our farm
Our Journey with Non GMO grain production

• First year we did it to reduce production cost
• Second year we added Identity preserved to our grain marketing plan
• When we decided to transition to Organic production we were able to use it as a method to capture a grain premium to help income in the transition years  
  • This still remains a good option for the transition acres
• Continues to be a commonly used production system in our operation to help lower cost of production  
  • We feel like the cost savings are worth growing Non-GMO
Our Journey with Non GMO

• Diverse crop mixture adds harvest logistic challenges
  • We are finding out that our extremely diverse crop mixture is adding to harvest challenges and thus increasing our production costs
    • Has us considering growing the non GMO to save on production costs, but we may not sell them into IP market so we don’t have to segregate all the production

• Like many things in production ag it takes time to figure out what the right “combination” is for the operation
How do we grow and market Non GMO

• Began by selecting fields that would be good fits
  • Square, no waterways
  • Previously had good weed control
  • Strategically located closer to bins

• Did not sell for a premium in the first year
  • More concerned about how to grow the Non GMO crop
  • Figured we could cross the road of marketing for premium later

• Worked on grain premium the second year
  • Search out who is buying Non-GMO
    • Cargill in CR was our closest market and happened to have the best premium so we went with them
How do we grow and market Non GMO

• Setting up our infrastructure to handle the change in production methods
  • Staying on top of weed control
    • Importance of a good pre emergence herbicide program.
    • Timely scouting and spraying post emergence
    • Needed to purchase our own sprayer to make sure we had timely application
    • Realized that we may need to row crop cultivate to help with weed control
  • Became more dependent on crop rotation
    • Switched away from Corn on corn in the initial years of non GMO Corn production
      • No rootworm protection with the seed
    • Now that we have a better understanding of growing non GMO we are going back to more Corn on corn production and using an insecticide with the planter
      • Still seeing good yield results
How do we grow and market Non GMO

• Setting up our grain handling infrastructure to handle Non GMO
  • Coordinating bin space and location to accommodate storage of the crop
    • Most Non-GMO purchasers will buy on allocations only
      • Need to have good storage and get the grain dry so it stores well.
      • Need to take cost of carry into consideration
        • In certain cases you may be better off just selling it as regular grain and stopping your cost of carry
        • In addition to the premium we usually do see a better basis at the facilities that take non GMO crops to.
      • Shuffling and allocating bin space adds some challenges
  • Had to upgrade our semis and trailers to make sure we were more road worthy to make it a longer distance
## Budget vs GMO

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Challenges and Opportunities

• Coordinating harvest and storage
• Getting a good enough premium
  • 10% of sales price seems to be the typical premium paid
  • We feel like this needs to be closer to 20-25% to make it worth marketing as IP
• Managing weed control
• Managing logistics hauling corn to processor
• Make sure that the IP purchaser is reputable for paying and taking allocations when they say they will
  • Another reason this drew us to Cargill to start out
• Pest issues
• Easier to manage input costs with this method of production
Challenges and Opportunities

• Keeps us on our toes to save money and always has us considering the next opportunity
• Clearly is a must in the organic production
  • This is the type of premium we enjoy collecting
• Doesn’t take many years to learn how to grow and market
• Helps make the lender more at ease
The Future of Non GMO in our Operation

• Continue to use Non-GMO for all of our organic transition acres
• Search out better premium markets
  • Would help allow us to continue to grow it for a premium
• Continue to grow Non GMO on our commercial acres
  • Mainly due to lower production costs
• Evaluate our operation comprehensively and determine how we can logistically make it continue to fit into our operation
  • There likely can be a win-win for decreased production cost and increased grain prices
    • Just need to find that right combination
      • Having organic in the mix adds to the challenges
Non-GMO
Corn and Soybeans
Non-GMO Corn Premiums

- Premium Range (Yellow Corn): .10-.30/bu above posted bid.
- Premium Range (White Corn): .10-1.50/bu above posted bid.
- Premium Range (Blue Corn): 2.00/bu above posted bid.
Non-GMO Corn Specs

• Barges:
  • Yellow Corn
    • US#2 Corn
    • 15.0% Moisture
    • 97% Non-GMO Purity
  • White Corn
    • US#1 Corn
    • 14.5% Moisture
    • 97% Non-GMO Purity

• Containers:
  • Yellow Corn
    • US#2 Corn
    • 14.5% Moisture
    • 97% Non-GMO Purity

• Feed:
  • Yellow Corn
    • US#2 Corn
    • 15.0% Moisture
    • 95% non GMO Purity
Non-GMO Food Corn Specs

- US#1 Corn (56-60 Test Weight)
- 14.0% Moisture
- 99.1% Non GMO Purity
- 5-10% Stress Cracks
Non-GMO Soybean Premiums

- Clear Hilums: 1.50 – 3.00/bu above posted bid.
- Black Hilums: 1.25 – 2.00/bu above posted bid.
- Brown/Buff Hilums: .50 – 1.50/bu above posted bid.
- Variety specific premiums.
Non-GMO Soybean Specs

- **Food Grade**
  - US#1 Soybeans
  - 13.0% Moisture
  - 99.1% Non-GMO Purity

- **Feed Grade**
  - US#2 Soybeans
  - 13.5%-14.0% Moisture
  - 99.1% Non-GMO Purity

- **Dirty seed coats.**
- **Edging seed coats.**
- **Purple molding.**
- **2nd crop soybeans/after wheat beans.**
- **Cracked seed coats/artificial drying.**
Marketing

- Firm contract specs.
- Acres vs Bushel program.
- Next best market.
- Rejection.

- Purity testing.
- Lower moisture.
- Samples.
Questions?

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