CUSTOMER EXPERIENCES: CHALLENGES AND SUCCESSES

Kevin Rozenboom
Farmers Coop Society
Precision Ag Manager
krozenboom@farmerscoopsociety.com
MULTI HYBRID PLANTING THROUGH THE YEARS

- My Background
- Introduction into the Concept
  - NC IA MVP Soybean
  - How we put it together
- Introduction into Corn Multi-Hybrid Planting
  - How we put it together
    - Yield / Soil Types
- Challenges faced
- Results
- Feedback: What works / What doesn’t
BACKGROUND

• The Early Years
  • Livestock and Grain Farm
  • Farrow – Finish Hog Operation
  • 500 Acres Corn / Soybeans / Alfalfa
  • 4-H - Hogs, Cow / calf, Gardening
Figure 1. Map of Iowa delineating the 21 principal soil association areas (letters). B designates the Mississippi bottomland.
BACKGROUND

- Young Adult Years
  - 2001 Bachelors: Ag-Business
  - Moved to North Central Iowa
    - Ag Retailer: Fertilizer and Chemical
      - GPS Lime, P, K
    - 2006 Joined GPS department of another local cooperative
      - Ag Leader, Trimble
Figure 1. Map of Iowa delineating the 21 principal soil association areas (letters). B designates the Mississippi bottomland.
INTRODUCTION IN THE CONCEPT

• 2002 : First Full Agronomy Year
  • Dying Soybeans
    • Carryover?
    • “Thought I killed the Beans”

• Iron Chlorosis
  • Clarion / Nicollet / Webster
  • High pH Soils / Poor drainage
INTRODUCTION INTO THE CONCEPT

- Local Grower was working to minimize the impact of the High pH soils on soybean yield
- Maintain the high yield acres / Bring up the low yielding areas of soybeans.
- Multi-Hybrid Placement (MVP) was being created to help.
MVP - SOYBEANS

- Equipment options
  - Twin Bin Air Max followed by Land Roller
    OR
  - Create your own planter.
    - Flexicoil cart and JD planter
      - 2 Feed Rolls
      - 2 Delivery Hoses
      - 2 Distributors – 8 Rows Each
      - Electric over Hydraulic Control
MVP SOYBEAN

- Layers Used for the MVP Rec
  - Yield Map
  - Soil pH Map
  - EC Map

- Three Ranges
  - Offensive - Green
  - Blend - Yellow
  - Defensive - Red
MVP SOYBEAN - VARIETIES

• Offensive Soybean
  • Racehorse / Top end Yield
  • Cyst Resistant

• Issues
  • Will die if placed in the wrong spot
  • Stressful weather conditions
MVP SOYBEAN - VARIETIES

- Defensive Soybean
  - Yields in high pH area
  - Iron Chlorosis tolerant
  - Handles wet feet

- Issues
  - Yields, but not a ‘plot winner’.
WHAT ABOUT CORN?

- Equipment Adaptable?
  - Can we change hybrids?
    Yes!
  - Can we change rates?
    Yes!
  - Can we keep good spacing?
    NO!
FAST FORWARD – 2014

- Moved to NW Iowa
- Precision Planting introduces vSet Select in the Fall
Figure 1. Map of Iowa delineating the 21 principal soil association areas (letters). B designates the Mississippi bottomland.
MULTI-HYBRID PLANTING

- Partnered with Operation that actively includes 3 Generations.
  Grain & Livestock
- Farm in Lyon, Sioux County (IA) and Lincoln Co. (SD)
- Rolling ground with variability.
EQUIPMENT

Spring 2015

• Retro-fitted 2011 JD1770NT 24r30.
  • SeedSense 2020, vSetSelect, AirForce, CleanSweep
  • $55,000 ($2300/row)

• Lexion 730 w/ Ag Leader Integra and Quantimeter system
DATA LAYERS

- Years of Yield History
  - Normalized by Crop Type
  - Soil Type
  - Soil CEC, OM
  - Fertility (P,K)
  - Others as see fit

- Multi-Hybrid Rec made in-house
HYBRID SELECTION

- Work with 3 Primary Seed Corn companies
- Depend on the seed dealers input for most product placement.
- Ground truth throughout the season
- “Top Performers”

Variety selection choose from aggregated data with similar variables
CHALLENGES OF MULTI HYBRID PLANTING
QUALITY DATA

- Yield history
  - Historical good data
  - Normalized yield data
  - Imagery can possibly substitute
- CEBIS Quantimeter w/ 12 row head
  - Bad Flow delays cause bad maps
- 2017 Updated combine with a Precision Planting YieldSense system
  - Better yield definition
QUALITY DATA

• New in-cab technologies help us with time management and accuracy.
  • FieldView / AgFiniti / MyJohnDeere

• Variety reference / locator map
  • vSet Select + Integra Yield monitor = hours of manually creating variety locator maps
  • I primarily use SMS
REAL WORLD CHALLENGES

- Right product, right acre. Every time???
  - Variety information is hard without help!
  - Who wants to be on the ‘poor acre’?
  - “Hybrid turnover”
    - 2-3 year market life

Is this the Golden Ticket?
VARIETY CHALLENGES

• Matching Relative Maturities
  • Corn (+/- 3 days)
    • Fast dry down / stalk strength
  • Soybeans +/- .2
    • Pioneer varieties vs NK varieties

• Disease packages
  • 2015 – Northern Corn Leaf Blight
    40 bu / acre difference
PLANTER SEED

• vSet Select 24r 30
  • Soybean seed delivery to the outside rows
    4.5 mph max before the meters ran out of seed from the CCS tank
  • Used the bulk fill entrainer from PP to help.

• Meter brushes and overfilling
PLANTER ISSUES

- Operator error – Hybrid selection
  - Assigned wrong hybrid from the Blue and Orange tanks

2018 - Color coded maps and spreadsheet to match tanks
PLANTER ISSUES

- Technology can leave you sitting
- Pinched wires are bad.
RESULTS

• Should we start slow??? No.
  • 2015
    • Planted 1560 acres
    • Harvested 1416 acres
    • Tested 376 acres (5 fields)

• Average Gain / Loss = -4.75 Bu/ac
  • Northern Corn Leaf Blight + Offensive hybrid = Yield loss
  • No soybeans planted using Multi-Hybrid rec

• Win % = 40%
RESULTS

• 2016
  • Planted 2160 acres
  • Harvested 1784 acres
  • Tested 1421 Corn acres (15 fields)
  • Tested 189 Soybean acres (2 fields)

• Average Corn Gain / Loss = +0.6 Bu/ac
  • Win big / Lose big (+35bu / -12bu)
• Average Soybean Gain / Loss = +4.47 Bu/ac
• Win % = 65%
RESULTS

• 2017
  • Planted 1850 corn acres
  • Harvested 1418 acres
  • Tested 1380 Corn acres (18 fields)
  • No soybeans in 2017

• Average Corn Gain / Loss = +2.1 Bu/ac
  • Better yield maps and confidence

• Win % = 55%
TAKEAWAYS:
TECHNOLOGY WORKS
TAKEAWAYS: HYBRID SELECTION

- Seed advisors are important
- Valid hybrid information is hard to find
- Hybrid turnover
  - “Stay with the old” vs.
    “Go with the new”
- Don’t overlook disease ratings
- RM of hybrids and Harvest moisture
TAKEAWAYS:
WORKS EVERYWHERE?

- Not everywhere but there is a fit on fields with variability.
- It is a challenge to justify the equipment if there isn’t enough variability.
- Soybeans might be easier to place than corn in Northern Iowa.
TAKEAWAYS:  
ADDED BENEFITS

• Fill the planter with two hybrids
  • Don’t stop to fill

• Field Averages continue to gain
  • 2014 Corn as a baseline
    2015 = +22 bu/ac
    2016 = +13 bu/ac
    2017 = +6 bu/ac

• 2014 – 2017 = +41 bu/ac
QUESTIONS?

Thanks for your time

Kevin Rozenboom
Farmers Coop Society
(712) 725-2386
Boyden, IA
krozenboom@farmerscoopsociety.com