Headland Pathway Management

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Client: Cedar Valley Innovation LLC, Waterloo, Iowa

Problem Statement
- Farmers are losing crops due to contact with equipment
- Money is being lost due to crop destruction
- Plants are being killed because of late season fertilizer application, equipment is knocking down plants to a point where they are unable to recover

Scope
- Present the economic benefits of equipment turning lanes in headlands of fields to prevent crop destruction

Objective(s)
- Perform an economical analysis of equipment pathways in field headlands

Constraints
- Completion date: April 2018
  - Economic analysis: January 2018
- Materials needed
  - SMS software
  - Yield data
- Analyze and plan equipment turn around lanes within the headlands of a field

Methods
- Calculate financial impact of seed savings
- Estimate yield improvements around turn around lanes
- Use SMS to plan planter skips to dedicate pathways

Corn Destroyed by Late Season Fertilizer Application
- These pictures are representative of the lost corn due to being run over by late season application-red ovals show applicator pathways through downed corn

Above and right: Yield data showing lost yield in the north and south end of the research fields, respectively

Major Outcomes
- Identify opportunities to utilize headland turn around lanes
- Determine financial impact turn around lanes will have
- Implement turn around lanes into planting prescription

Benefit to Client
- Financial savings
- Better yield
- Less crop destruction

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