How wildlife habitat needs & precision agriculture can fit within agricultural land business models

Pete Berthelsen
PF & QF Director of Habitat Partnerships
Discussion Topics

How conservation can fit Monarch Butterfly things
Some new options
The Need To Make Every Acre The Best It Can Be
How We Make It Happen

Conservation
Fitting into the Farm & Ranch Plan
Vision: To demonstrate through the use of technology and collaboration, farmers will increase their profitability while also providing benefits for soil health, water quality and wildlife habitat.
How We Make It Happen

Precision Ag Business Planning Specialist

Provide Return on Investment (ROI) planning analytics to farmers and agronomists using a precision agriculture business planning platform.

Emphasis to provide clients with technical software support and training to integrate the Profit Zone Manager™ economic analysis tool into other precision ag platforms and decision making processes.
Precision Ag Business Planning Cycle

- Increased ROI & profitability
- Conservation Cover Options Presented to Landowner
- Conservation Planning
- NRCS/SWCD/PF Farm Bill Wildlife Biologist
- Revenue Negative Acres
- Revenue Positive Acres (redirect working capital into the best soils)

Grower

Ag Retailer = CCA, Co-op, Ag Lender, Implement Dealer

Precision Ag Business Planning Specialist

Profit Zone Manager
Production agriculture and conservation work together economically at the sub-field level.
### Real World Examples

#### Minnesota Corn Farmer

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acreage</td>
<td>181.00 acres</td>
</tr>
<tr>
<td>Field Average Yield</td>
<td>145.06 bu/ac</td>
</tr>
<tr>
<td>Profit</td>
<td>$44.18/acre</td>
</tr>
<tr>
<td>ROI</td>
<td>6.49 %</td>
</tr>
<tr>
<td>Total Field Expenses</td>
<td>$123,282.72</td>
</tr>
<tr>
<td>Total Field Revenue</td>
<td>$131,279.30</td>
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<tr>
<td>Total Field Profit</td>
<td>$7,996.58</td>
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Real World Examples
Real World Examples

Minnesota Corn Farmer

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<tr>
<td>Field Average Yield</td>
<td>157.66 bu/ac</td>
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<tr>
<td>Profit</td>
<td>$86.90/acre</td>
</tr>
<tr>
<td>ROI</td>
<td>14.01 %</td>
</tr>
<tr>
<td>Total Field Expenses</td>
<td>$112,256.70</td>
</tr>
<tr>
<td>Total Field Revenue</td>
<td>$127,985.72</td>
</tr>
<tr>
<td>Total Field Profit</td>
<td>$15,729.02</td>
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CRP areas indicated on the map.
### Real World Examples

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<th>Scenario: Actual Production - 2013</th>
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+8.7%  
+96.7%  
+115.9%  
- 8.9%  
- 2.5%  
+ 96.7%
Monarch Butterfly Population
90+% Decline in 2 Decades

2.8 Acres
March 8-9, 2016
Monarch - Milkweed Factoids

92%

1.4 Billion

2000 = 73x

29

2%
The Need
To Make Every
Acre The Best
It Can Be
Honey Bee & Monarch Butterfly Partnership
Honey Bee & Monarch Butterfly Partnership

Demonstrate Great Habitat
Honey Bee & Monarch Butterfly Partnership

Free Seed Mixtures

Annual Rental Payment

Planting Incentive Payment

3 to 6 Year Contracts
Honey Bee & Monarch Butterfly Partnership

Broad Financial Support

Better Habitat Designs

USGS Evaluation Support
Endangered Species Listing Is Not An Option
U.S. Fish & Wildlife Service
USFWS Monarch Butterfly National Conservation Priorities
--DRAFT August 2015--

USFWS Monarch Conservation Priorities

*This map is intended to inform U.S. Fish and Wildlife Service national-scale monarch butterfly conservation efforts, created using tools developed by the USGS-led Monarch Conservation Science Partnership, in this case for maximizing overwintering population-level outcomes through a combination of focusing on geographic areas, threats to be avoided. This is a DRAFT version and may be adapted or customized for local needs, and updates will be ongoing, using the best available science.
60% Likelihood of Extinction in 20 Years
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Questions?

Peter Berthelsen
Director of Habitat Partnerships
Pheasants Forever, Inc.
1011 Alexander Avenue
Elba, NE 68835
308-390-0848
pberthelsen@pheasantsforever.org