ECONOMICS OF GROWING CORN ON CORN

All corn on corn is not the same!
CCS Rotation
CCC Rotation
All Economics is not the same!
Long Run
Short Run
ECONOMICS

Long Run or Short Run Strategy?

• Short Run
  – Plant all corn and lock in profits by purchasing a revenue insurance product with a high coverage level. (lock in $603.90/ac. minus basis – premium is $46.10/ac.)

• Long Run
  – Concern about using a monoculture and incurring disease, weed, and other problems in the future.
ROTATION DECISIONS

- Corn - Soybeans  CS
- Corn- Corn- Soybeans CCS
- Corn-Corn-Corn  CCC
Factors to Consider when making the Corn vs Soybean Decision

• Ratio between corn & soybean prices
• Yield differences between soybeans, corn after soybeans, and corn after corn
• Operational concerns with planting more corn
  – Shorter planting window
  – More complicated harvest (volume, drying, slower, yield loss, increased production risk)
Ratio between corn and soybean prices

- Ratio between corn & soybean prices range between 1.44 to 1.99 where CCS and CCC move to make corn more profitable. Historic ratios have run around 2.5

- Present Crop Insurance Prices are $8.09 for soybeans and $4.06 for corn

- Price is not everything—there are other considerations
Ag Decision Maker

This web site is a wealth of information concerning farming in Iowa.

www.extension.iastate.edu/agdm

Rotation Profitability Calculator A1-80

Two different calculators, one gives you breakeven price, the other gives you optimum N Rate
Rotation Profitability Calculator - using optimal nitrogen rate

Ag Decision Maker -- Iowa State University Extension
For more information, visit Evaluating Rotations.
Long-term average yields - Iowa Corn and Soybean County Yields,
Agronomy Extension - Nitrogen Rate Calculator

Place the cursor over cells with red triangles to read comments.
Enter your input values in shaded cells.

### Corn-Soybeans (CS)
- **Corn Yield Goal**: 200 bushels/acre
- **Soybean Yield Goal**: 55 bushels/acre
- **Expected Corn Price**: $4.50/bushel
- **Expected Soybean Price**: $6.25/bushel
- **Typical N Application**: 160 lbs/acre

### Corn-Corn-Soybeans (CCS)
- **1st Corn Yield Goal**: 200 bushels/acre
- **2nd Corn Yield Goal**: 175 bushels/acre
- **Soybean Yield Goal**: 55 bushels/acre
- **Expected Corn Price**: $4.50/bushel
- **Expected Soybean Price**: $6.25/bushel
- **N Application to 1st Corn**: 160 lbs/acre
- **N Application to 2nd Corn**: 185 lbs/acre

### Corn-Corn (CC)
- **Corn Yield Goal**: 165 bushels/acre
- **Expected Corn Price**: $4.50/bushel
- **Typical N Application**: 185 lbs/acre

### Return to Management
- **Corn-Soybeans**: $300.00
- **Corn-Corn-Soybeans**: $250.00
- **Continuous Corn**: $200.00

### Comparison Table
<table>
<thead>
<tr>
<th></th>
<th>CS</th>
<th>CCS</th>
<th>CC</th>
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<tbody>
<tr>
<td>Optimal N Rate</td>
<td>141</td>
<td>200</td>
<td>200</td>
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<td>1st C</td>
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<td>2nd C</td>
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<tr>
<td>Return to Management</td>
<td>$252.11</td>
<td>$272.59</td>
<td>$272.90</td>
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<tr>
<td>% of Typical N Application</td>
<td>88</td>
<td>108</td>
<td>108</td>
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</table>

### Additional Inputs
- **N Price Paid**: $0.30 per pound
- **P Price Paid**: $0.33 per pound
- **K Price Paid**: $0.18 per pound
- **Land Charge**: $140
- **Wage rate**: $9.50 per hour
- **LP Price**: $1.80 per gallon
- **Diesel Fuel Price**: $1.60 per gallon

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University Extension

... and justice for all

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Version 1.0
Author: Mike Duffy
David Correll
Date: 2/28/2007
Need to make some assumptions to use the calculator

- **Yield Goals under different rotations**
  - CS 200 bu./ac., 55 bu./ac.
  - CCS 200 bu./ac., 175 bu./ac., 60 bu./ac
  - CCC 165, bu./ac.

- **Land Charge** $200.00/ac.

- **Nitrogen Rate** 160 lbs 1\textsuperscript{st} yr, 185 lbs 2\textsuperscript{nd} yr

- **Fertilizer Prices** N $.30, P $.33, K $.18
## Rotation Profitability Calculator - using optimal nitrogen rate

**Ag Decision Maker -- Iowa State University Extension**
For more information, visit [Evaluating Rotations](#).
Long-term average yields - [Iowa Corn and Soybean County Yields](#).
Agronomy Extension - [Nitrogen Rate Calculator](#).

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Version 1.0
**Author:** Mike Duffy
**David Correll**
Date Printed: 2/28/2007
Situations where C-S Rotation Returns Exceed Corn Returns at $4.06/bu corn

• Soybean prices exceed …. $7.70
• Soybean yields are above… 55 bu./ac
• Corn yields are below 175 bu./ac or 2\textsuperscript{nd} year corn yields fall off more than 12.5%
Summary

- Planting all corn or increased corn in 2007 likely will be more profitable than planting soybeans
- Revenue insurance at high coverage levels can be used to lock in profits
- What you do in 2007 could affect profitability in years beyond 2007. There might not be any soybean land available to rotate to in 2008 and beyond
- Make sure to lock in profits while they exist