

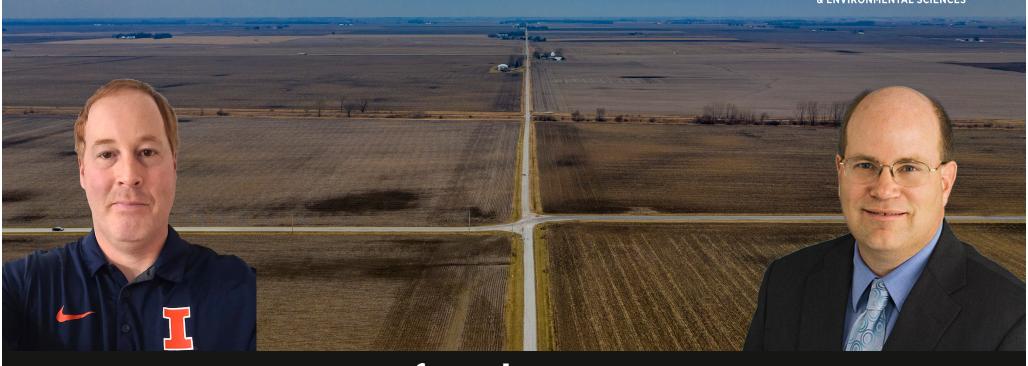
FAST Tools and Financial Planning

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Agricultural &

Consumer Economics

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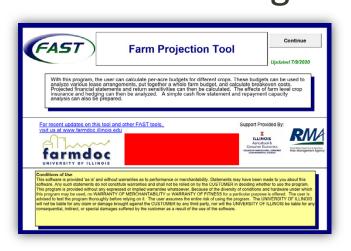
Ryan Batts

farmdocdaily

Gary Schnitkey

FAST Tools and Financial Planning

FAST (Farm Analysis Solution Tools) is a set of Microsoft Excel spreadsheets that may be used to evaluate management decisions on farm.

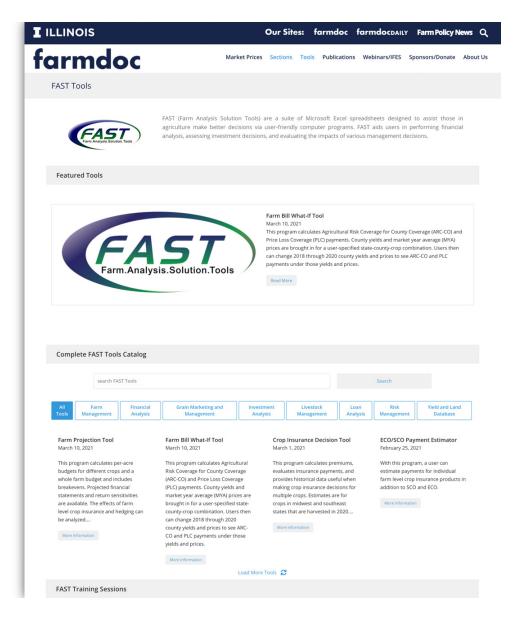


We will demonstrate use of the *Farm Projections Tool*.



Have you used the downloadable FAST tools?

○Yes





Topics

- Current Prices and Cost projections for 2021
- FAST
- Farm Projections Tool
- Other FAST Tools



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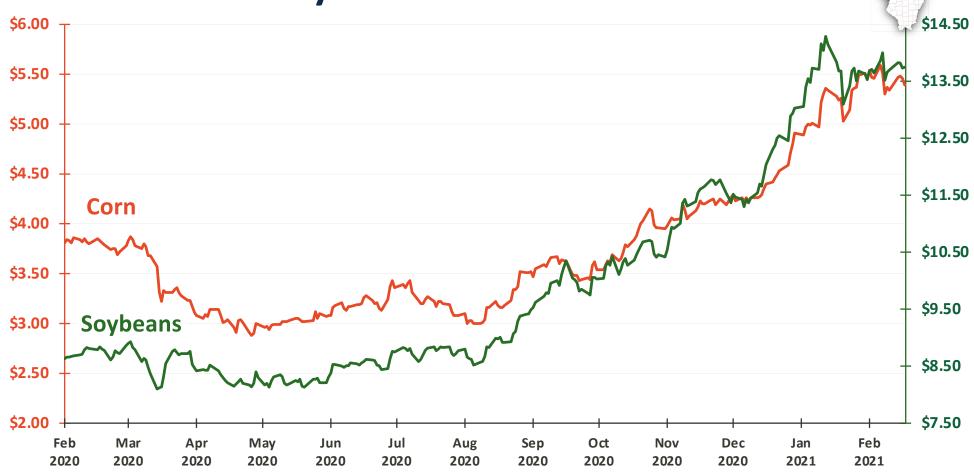












Market Year Average Prices

	Market Yea	ar					
	2015	2016	2017	2018	2019	2020P	2021P
Corn	\$3.61	\$3.36	\$3.36	\$3.61	\$3.56	\$4.30	\$4.20
Soybeans	\$8.95	\$9.47	\$9.33	\$8.48	\$8.57	\$11.15	\$11.25
Wheat	\$4.89	\$3.89	\$4.72	\$5.16	\$4.58	\$5.00	\$5.50

Used in setting ARC/PLC payments

2021 estimates were released by USDA at Ag Outlook Conference, note that we expect little/no payments in 2020 and 2021

Corn and Soybeans: Baseline

Central Illinois,		Corn	Soybeans		
High-Productivity	2019	2020P	2019	2020P	
Yield per acre	208	228	64	72	
Price per bu	\$3.65	\$4.25	\$8.58	\$11.20	
Crop revenue	\$759	\$969	\$549	\$806	
ARC/PLC	\$10	\$0	\$10	\$0	
Ad hoc payments	\$110	\$68	\$94	\$45	
Crop insurance	\$14	\$0	\$9	\$0	
Gross revenue	\$893	\$1,037	\$662	\$851	
Total non-land costs	\$606	\$571	\$372	\$359	
Operator & land return	\$287	\$466	\$290	\$492	
Cash rent		\$275		\$275	
Farmer return	\$12	\$191	\$15	\$217	
50% Corn and 50% Soybean	Rotation				
Formor roturn	\$14	\$204	with ad hoc	Federal payme	ents
Farmer return	-\$88	\$147	without ad h	noc Federal pa	yments

Corn and Soybeans: Optimistic

Central Illinois,		Corn		Soybeans		
High-Productivity	2019	2020P	2021P	2019	2020P	2021P
Yield per acre	208	228	230	64	72	72
Price per bu	\$3.65	\$4.25	\$4.25	\$8.58	\$11.20	\$11.90
Crop revenue	\$759	\$969	\$978	\$549	\$806	\$857
ARC/PLC	\$10	\$0	\$0	\$10	\$0	\$0
Ad hoc payments	\$110	\$68	\$25	\$94	\$45	\$25
Crop insurance	\$14	\$0	\$0	\$9	\$0	\$0
Gross revenue	\$893	\$1,037	\$1,003	\$662	\$851	\$882
Total non-land costs	\$606	\$571	\$580	\$372	\$359	\$368
Operator & land return	\$287	\$466	\$423	\$290	\$492	\$514
Cash rent		\$275			\$275	
Farmer return	\$12	\$191	\$148	\$15	\$217	\$239
50% Corn and 50% Soybean Rotation						
Course of restricts	\$14	\$204	\$194	with ad hoc	Federal paym	ents
Farmer return	-\$88	\$147	\$169	without ad h	noc Federal pa	yments



Market Prices Sections Tools Publications Webinars/IFES Sponsors/Donate About Us

FAST Tools



FAST (Farm Analysis Solution Tools) are a suite of Microsoft Excel spreadsheets designed to assist those in agriculture make better decisions via user-friendly computer programs. FAST aids users in performing financial analysis, assessing investment decisions, and evaluating the impacts of various management decisions.

Featured Tools

Found at https://farmdoc.illinois.edu/fast



Farm Bill What-If Tool

March 5, 2021

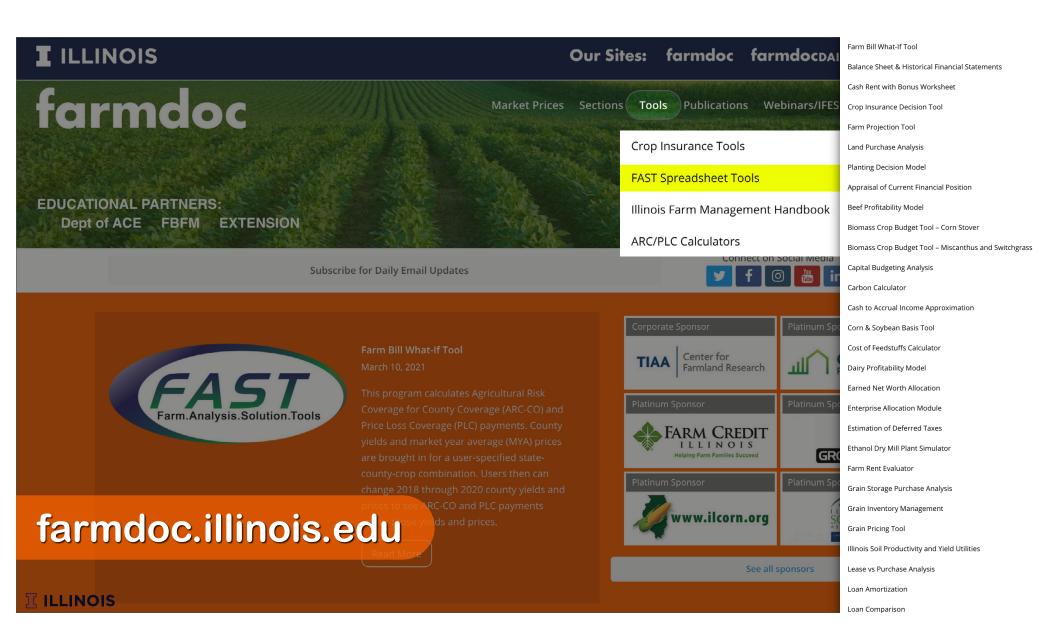
This program calculates Agricultural Risk Coverage for County Coverage (ARC-CO) and Price Loss Coverage (PLC) payments. County yields and market year average (MYA) prices are brought in for a user-specified state-county-crop combination. Users then can change 2018 through 2020 county yields and prices to see ARC-CO and PLC payments under those yields and prices.

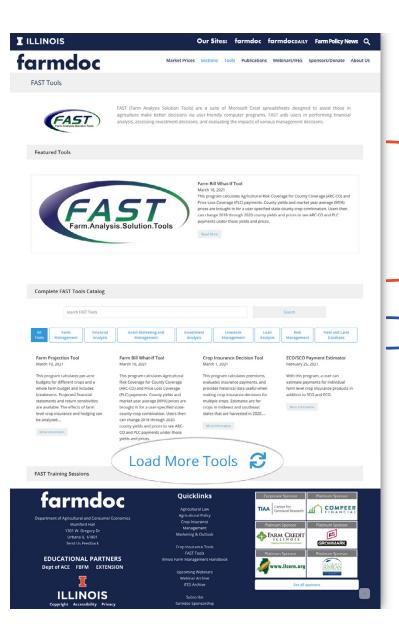
Read More

FAST Tools Introduction

- Microsoft Excel based decision making tools (40+ tools)
- Can be downloaded FREE from the farmdoc website
- Most will run on PC or Mac
 - A few will only work properly on a PC due to the use of macros
 - All of the tools contain macros, some require them to function
- Most can be downloaded as standalone spreadsheet, zip file, or installation file

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farmdoc.illinois.edu/fast

Featured Tools

Updated regularly with most recent tool update

Tool Categories

farmdoc

Market Prices Sections Tools

Publications

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Tools

Farm Management Financial **Analysis**

Grain Marketing and Management

Investment **Analysis**

Livestock Management

Loan **Analysis**

Risk Management Yield and Land Database

Farm Projection Tool



This program calculates per-acre budgets for different crops and a whole farm budget and includes breakevens. Projected financial statements and return sensitivities are available. The effects of farm level crop insurance and hedging can be analyzed....





Farm Bill What-If Tool

March 10, 2021

This program calculates Agricultural Risk Coverage for County Coverage (ARC-CO) and Price Loss Coverage (PLC) payments. County yields and market year average (MYA) prices are brought in for a user-specified statecounty-crop combination. Users then can change 2018 through 2020 county yields and prices to see ARC-CO and PLC payments under those yields and prices.

More Information

Crop Insurance Decision Tool March 1, 2021

This program calculates premiums, evaluates insurance payments, and provides historical data useful when making crop insurance decisions for multiple crops. Estimates are for crops in midwest and southeast states that are harvested in 2020....

More Information

ECO/SCO Payment Estimator

February 25, 2021

With this program, a user can estimate payments for individual farm level crop insurance products in addition to SCO and ECO.

More Information

Click on either Tool Title

or More Information for that tool's page

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Our Sites: farmdoc farmdocDAILY Farm Policy News



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FAST Tools

Farm Projection Tool

About This Tool

② Last Updated: March 10, 2021

This program calculates per-acre budgets for different crops and a whole farm budget and includes breakevens. Projected financial statements and return sensitivities are available. The effects of farm level crop insurance and hedging can be analyzed.

Download this FAST Tool

As an alternative to the executable tool you can download the zip file here.

Download Excel file

Installation File

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FAST Tools

Farm Bill What-If Tool

About This Tool

① Last Updated: March 10, 2021

This program calculates Agricultural Risk Coverage for County Coverage (ARC-CO), Price Loss Coverage (PLC) payments, and ARC at the Individual Level (ARC-IC). County yields and market year average (MYA) prices are brought in for a user-specified state-county-crop combination. Users then can change 2018 through 2020 county yields and prices to see ARC-CO and PLC payments under those yields and prices.

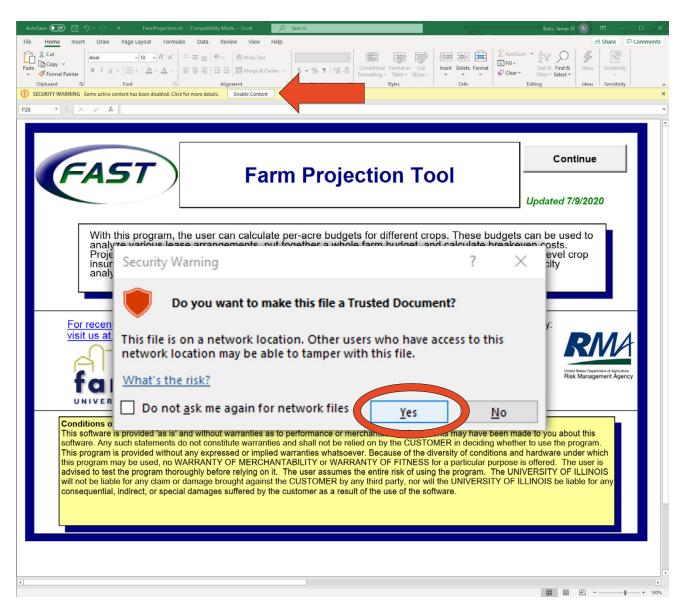
Download this FAST Tool

As an alternative to the executable tool you can download the spreadsheet here.



Demonstration Video

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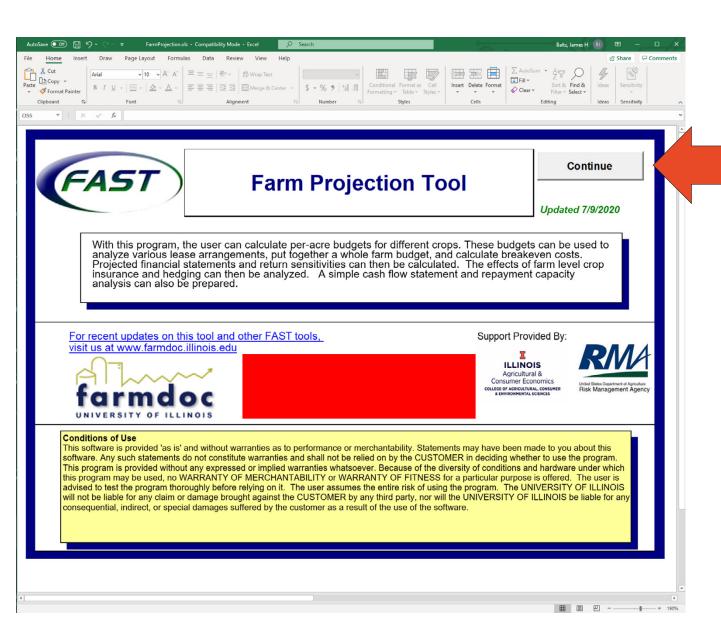


Tools will have Introduction sheet

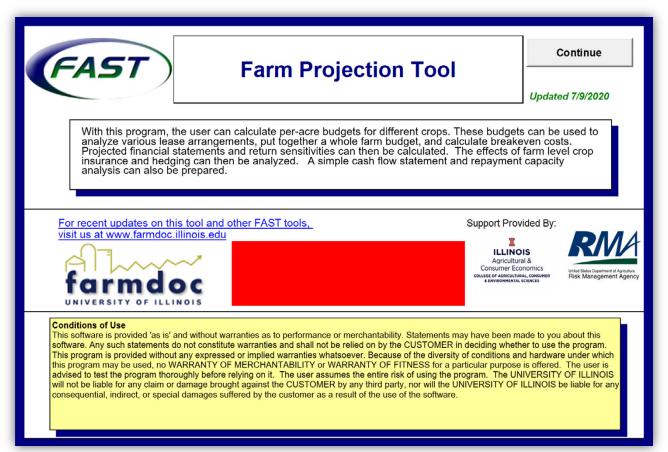
Need to "Enable Content"

wording varies based on Excel version

Most tools will work without enabling macros



Farm Projections Tool



Provides
projected cash
flow, break-even,
and sensitivity
for grain farms



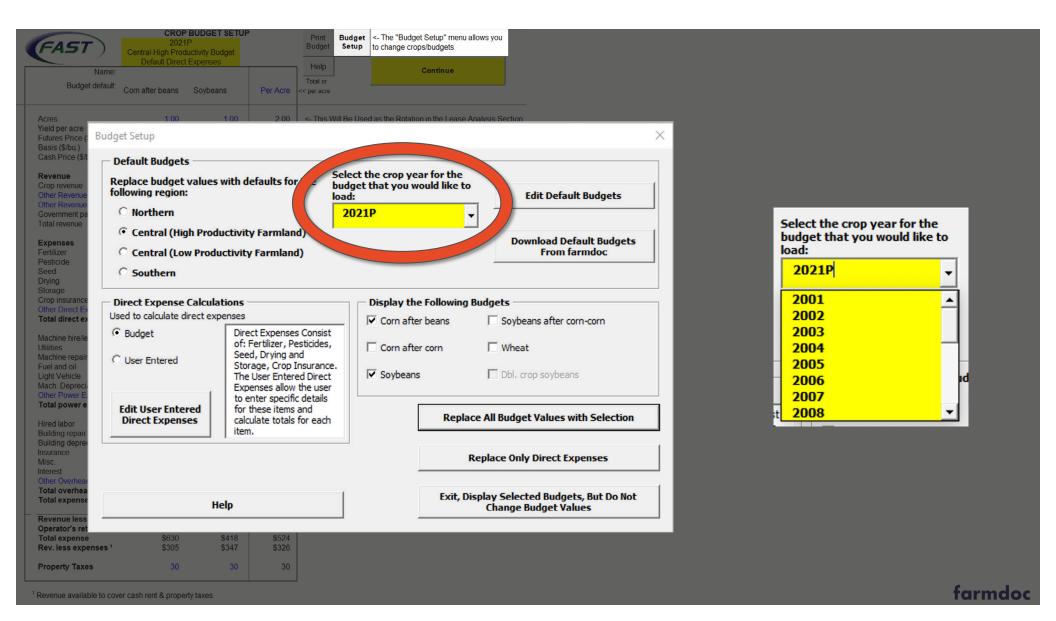
	Default Direct	t Expenses	
Name:			
Budget default:	Corn after		
Budget deladit.	beans	Soybeans	Per Acre
		Total	
		Per A	
Acres	1.00	1.00	2.00
Yield per acre	220	68	
Futures Price (\$/bu.)	\$4.55	\$11.55	
Basis (\$/bu.)	-\$0.30	-\$0.30	
Cash Price (\$/bu.)	\$4.25	\$11.25	
_	•		
Revenue		per acre	\$/acre
Crop revenue	\$935	\$765	\$850
Other Revenue 1	0	0	\$0
Other Revenue 2	0	0	\$0
Government payments	0	0	\$0
Total revenue	\$935	\$765	\$850
Evnances	•	nor coro	\$/acre
Expenses Fertilizer	\$135	per acre \$44	\$90
	φ135 76	Ψ44 45	\$90 61
Pesticide Seed	116	74	95
	15		8
Drying	15	0	12
Storage Cran incurance	24	16	20
Crop insurance	0	0	0
Other Direct Expense	\$381	\$187	\$284
Total direct expense	Φ301	Φ107	Φ204
Machine hire/lease	\$16	\$14	\$15
Utilities	5	5	5
Machine repair	24	21	23

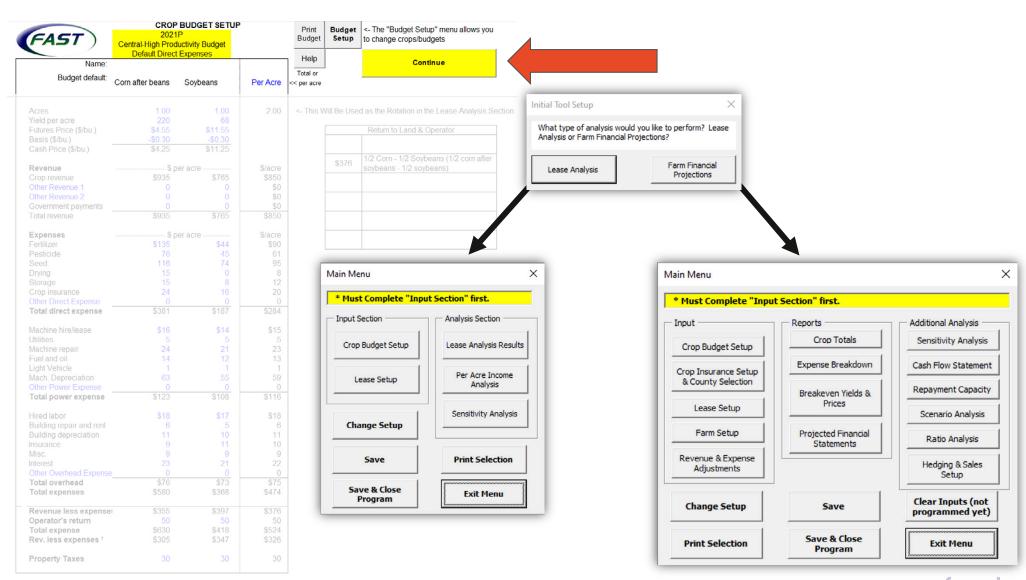
Data Entry

Blue text indicates cells that can be changed

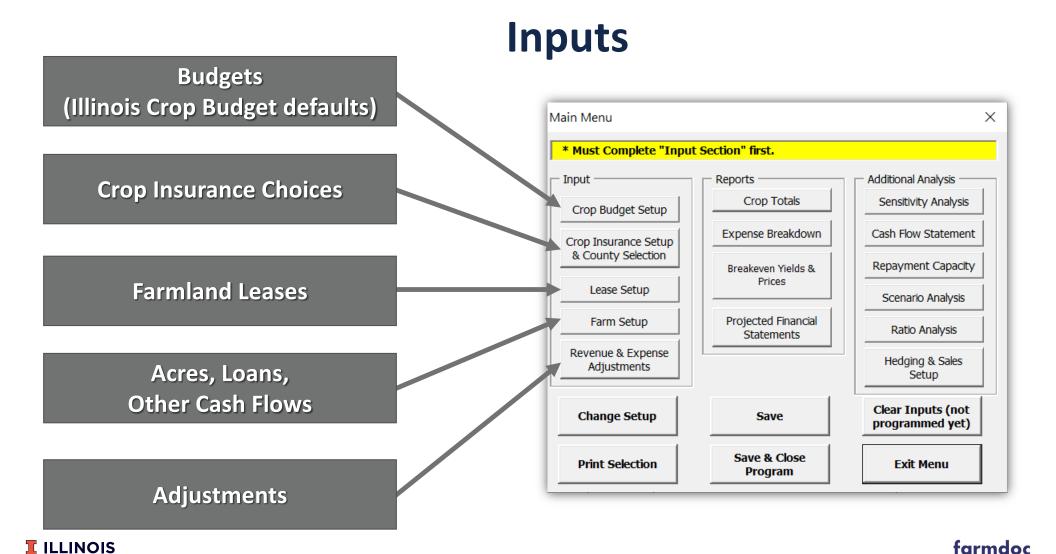
Some tools also use a yellow cell background with the blue text

Rest of sheet locked to protect formulas





¹ Revenue available to cover cash rent & property taxes



Budgets

University of Illinois budget defaults

Name:			
Budget default:	Corn after beans	Soybeans	Per Acre
Acres	1.00	1.00	2.00
Yield per acre	220	68	
Futures Price (\$/bu.)	\$4.55	\$11.55	
Basis (\$/bu.)	-\$0.30	-\$0.30	
Cash Price (\$/bu.)	\$4.25	\$11.25	
Revenue	\$ p	oer acre	\$/acre
Crop revenue	\$935	\$765	\$850
Other Revenue 1	0	0	\$0
Other Revenue 2	0	0	\$0
Government payments	0	0	\$0
Total revenue	\$935	\$765	\$850
Expenses	\$ p	oer acre	\$/acre
Fertilizer	\$135	\$44	\$90
Pesticide	76	45	61
Seed	116	74	95
Drying	15	0	8
Storage	15	8	12
Crop insurance	24	16	20
Other Direct Expense	0	0	0
Total direct expense	\$381	\$187	\$284

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Budgets

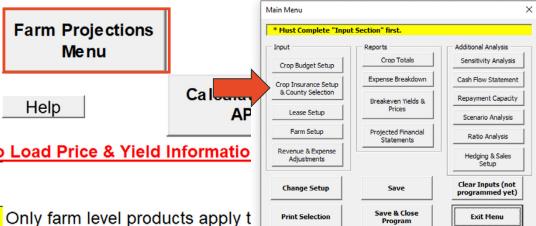
University of Illinois budget defaults

Property Taxes	30	30	30
Rev. less expenses 1	\$305	\$347	\$32
Total expense	\$630	\$418	\$52
Operator's return	50	50	5
Revenue less expenses	\$355	\$397	\$37
Total expenses	\$580	\$368	\$47
Total overhead	\$76	\$73	\$7
Other Overhead Expense	0	0	
Interest	23	21	2:
Misc.	9	9	
Insurance	9	11	1
Building depreciation	11	10	1
Building repair and rent	6	5	
Hired labor	\$18	\$17	\$1
Total power expense	\$123	\$108	\$11
Other Power Expense	0	0	
Mach. Depreciation	63	55	5
Light Vehicle	1	1	
Fuel and oil	14	12	1
Machine repair	24	21	2
Utilities	5	5	3
Machine hire/lease	\$16	\$14	\$1



CROP INSURANCE SETUP

Crop Insurance



Illinois			
CHAMPAIGN	The County Sel	o Load	
	Corn	Soybeans	
Product	RP / 85%	RP / 85%	Only
APH	210	65	
Coverage Level	85%	85%	
Yield Guarantee	178.5	55.3	_

 Base Price
 \$4.50
 \$11.00

 Harvest Price
 \$803.25
 \$607.75

<- Base (Projected) Price

<- Harvest price

e Will Be Used in Analysis for Harvest Price Until Harvest Pr

Max. Protection Level		
Expected County Yield	192.6	60.9
Landlord Uses		
Insurance	Yes	Yes

Farm Level Products

CAT = Catastrophic Risk Protection

YP = Yield Protection

RP-HPE = Revenue Protection with Harvest Price Exclusion

RP = Revenue Protection

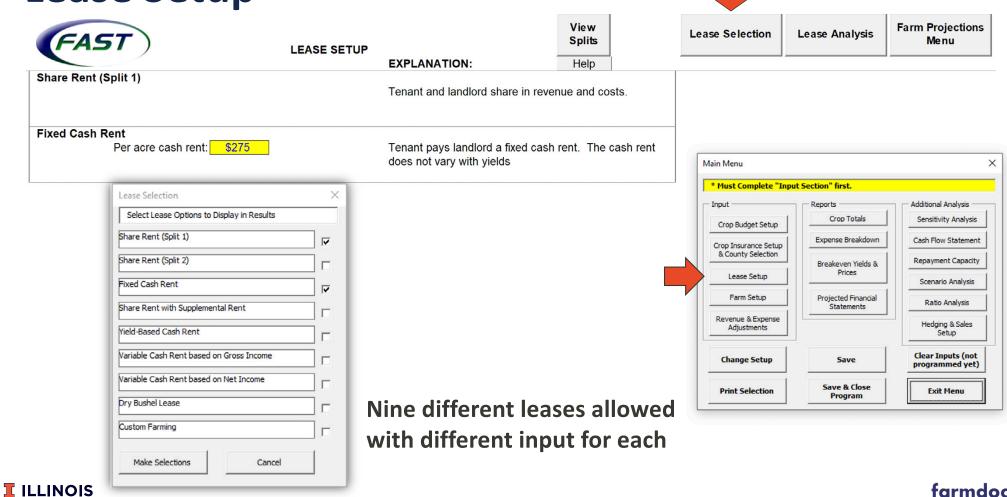
County Level Products

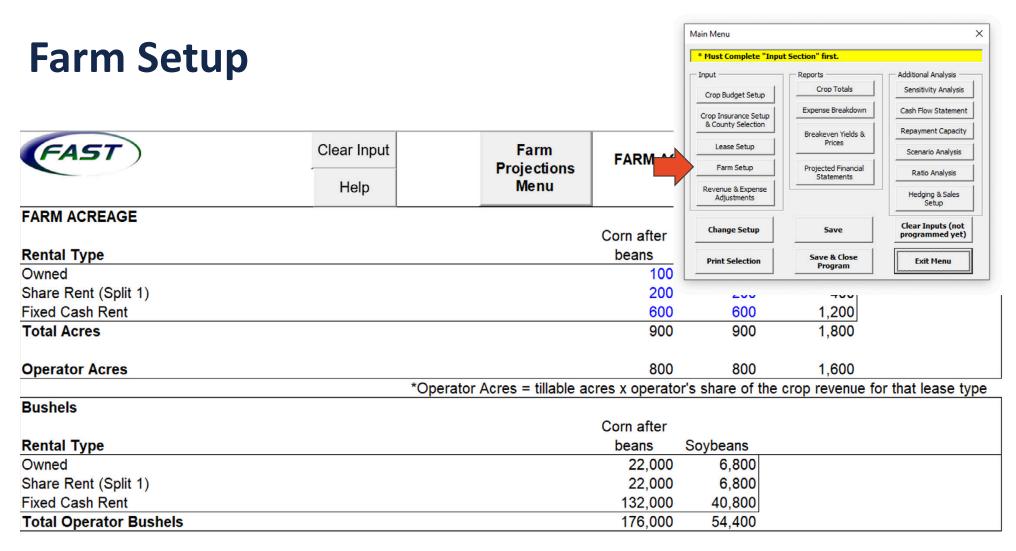
GRP = Group Risk Plan

GRIP = Group Risk Income Protection

GRIP-HRO = Group Risk Income Protection with Harvest Revenue Option

Lease Setup





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Farm Setup

LOAN INFORMATION				Budgeted Interest	\$39,600
			Beginning		
		Interest	Loan	Total	
	Years	Rate	Balance	Payment Principal	Interest
Direct entry of Term principal and interest p	payment			\$0	\$0
Real Estate Loan	15.00	3.80%	\$800,000	\$70,950 \$40,550	\$30,400
Equipment Loan	5.00	3.50%	\$250,000	\$55,370 \$46,620	\$8,750
Loan	0.00	0.00%	\$0	\$0 \$0	\$0
Loan	0.00	0.00%	\$0	\$0 \$0	\$0
Loan	0.00	0.00%	\$0	\$0 \$0	\$0
Operating Loan	XXXXX	3.25%	\$350,000		\$11,375
			\$1,400,000	\$126,321 \$87,171	\$50,525

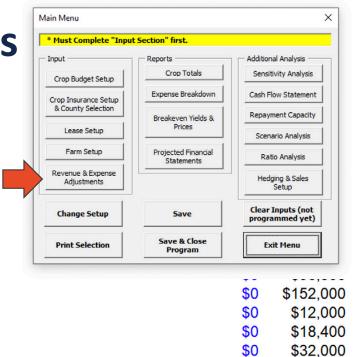
*Budgeted interest comes from the per acre budgets, if the user enters any loan information, it is used to calculate interest expenses instead of the budget

Other Revenues & Expenses		
Settlements	\$0	
Other farm revenue	\$10,000	
Non-farm income	\$36,000	
Family living expenditures	\$75,000	
Capital expenditures	\$0	Estimate Tax
Income and SS tax	\$73,847	Estillate Tax



Revenue & Expense Adjustments

Revenue Crop revenue Other Revenue 1 Other Revenue 2 Government payments Total revenue	Calculated Total \$1,360,000 \$0 \$0 \$0 \$0 \$1,360,000
Variable costs	¢142 200
Fertilizer	\$143,200
Pesticide	\$96,800
Seed	\$152,000
Drying	\$12,000
Storage	\$18,400
Crop insurance	\$32,000
Other Direct Expense	\$0
Machine hire/lease	\$27,000
Machine repair	\$40,500
Fuel and oil	\$23,400
Light Vehicle	\$1,800
Other Power Expense	\$0
Total Variable Costs	\$547,100



\$0

\$0

\$0

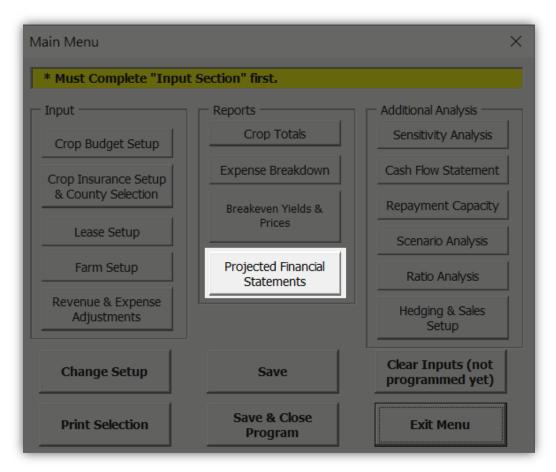
\$0

\$27,000 \$40,500

\$23,400 \$1,800

\$547,100

Reports: Projected Financial Statements



How optimistic are you about 2021 farm incomes?

- Very optimistic, chance to have a good year
- Cautiously optimistic, been here before, could be trust
- Going to crash & burn before fall, then back to low incomes















PROJECTED NET FARM INCOME

Projected
Net Farm Income

\$226,675

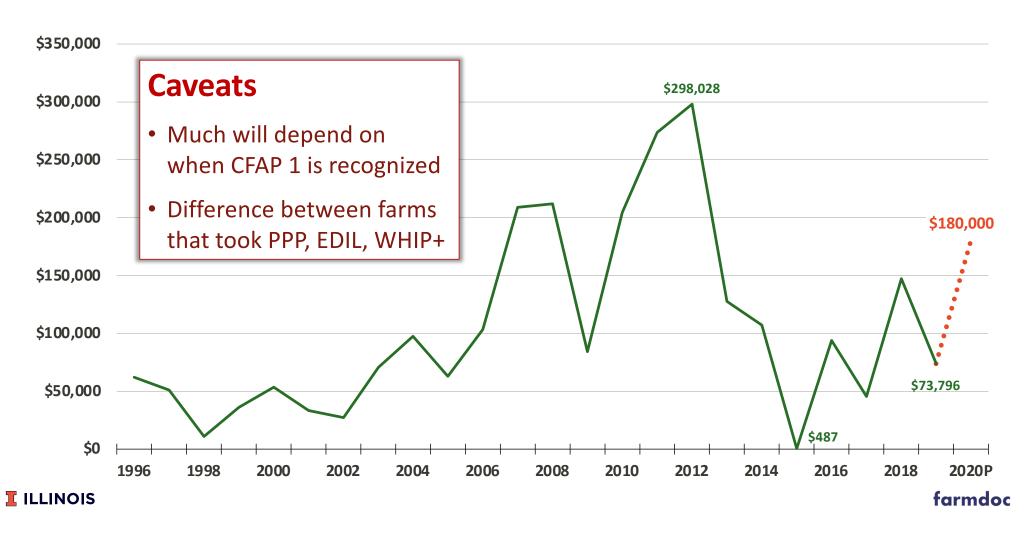
Corn

220 bushel per acre\$4.25 per bushel

Soybean
68 bushel per acre
\$11.25 per bushel

	Total	Operator	Tillable
	Farm	Acre	Acre
Crop revenue *	\$1,360,000	\$850	\$756
Other Revenue 1	\$0	\$0	\$0
Other Revenue 2	\$0	\$0	\$0
Crop Insurance Payments	\$0	\$0	\$0
Government payments	\$0	\$0	\$0
Other farm revenue	\$10,000	\$6	\$6
Total revenue	\$1,370,000	\$856	\$761
Variable costs	\$547,100	\$342	\$304
Other costs	\$420,600	\$263	\$234
Total operating costs	\$967,700	\$605	\$538
Income before interest expense	\$402,300	\$251	\$224
Interest costs	\$50,525	\$32	\$28
Income before depreciation	\$351,775	\$220	\$195
Depreciation	\$125,100	\$78	\$70
Net farm income	\$226,675	\$142	\$126
			farmdo

Grain Farm Net Incomes, Illinois FBFM



Scenarios

Price in \$ per bushel		Yield in Bushels per Acres		Net Farm
Corn	Soybean	Corn	Soybean	Income
\$4.25	\$11.25	220	68	\$227,000
\$3.90	\$10.50			\$124,000
\$3.50	\$10.00			\$53,000
\$4.00	\$10.50	235	72	\$223,475
\$3.50	\$10.00			\$129,475
\$5.20	\$12.20	150	60	\$202,000



Would you watch short webinars/videos on FAST tools?

- Yes, I think this is a good idea
- Yes, but I am being nice and will most likely not watch
- O I like the idea of video documentation
- Only if I have problems using the tools
- \bigcirc No











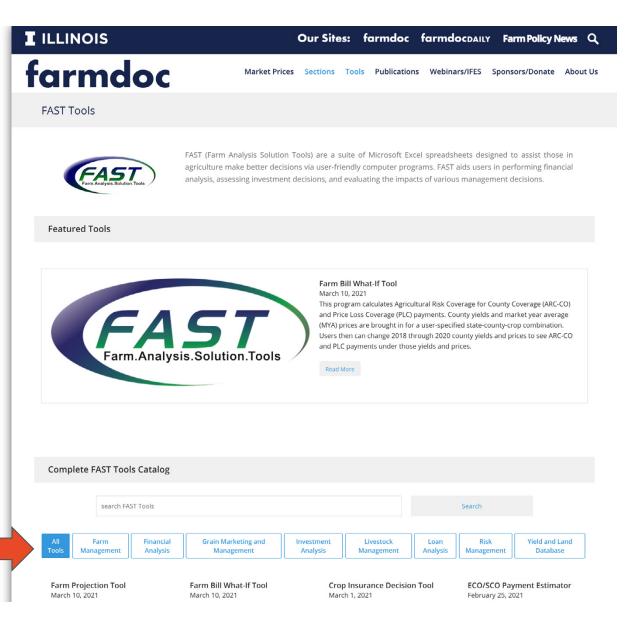






FAST Tools Organized by Categories

farmdoc.illinois.edu/fast





Financial Analysis Grain Marketing and Management

Investment Analysis Livestock Management Loan Analysis Risk Management Yield and Land Database

- Cash Rent with Bonus Worksheet
- Enterprise Allocation Module
- Farm Projection Tool
- Farm Rent Evaluator
- Machinery Economics
- Planting Decision Model





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Financial Analysis Grain Marketing and Management

Investment Analysis Livestock Management Loan Analysis Risk Management

- Appraisal of Current Financial Position
- Balance Sheet Program
- Cash to Accrual Income Approximation
- Earned Net Worth Allocation
- Estimation of Deferred Taxes
- Monthly Cash Flow Planning
- Personal Financial Statements
- Quick Cash Flow Projection
- Repayment Capacity Analysis



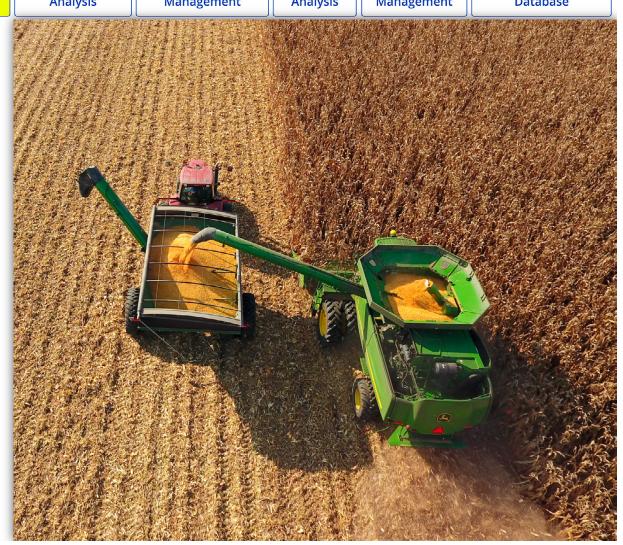


Financial Analysis Grain Marketing and Management

Investment Analysis Livestock Management

Loan Analysis Risk Management

- Basis Tool
- Grain InventoryManagement
- Grain Pricing Tool





Financial Analysis Grain Marketing and Management

Investment Analysis Livestock Management Loan Analysis Risk Management Yield and Land Database

- Capital Budgeting Analysis
- Grain Storage Purchase Analysis
- Land Purchase Analysis
- Lease vs Purchase Analysis
- Machinery Financing
- MACRS Calculator
- Savings Calculator
- Time Value Tools



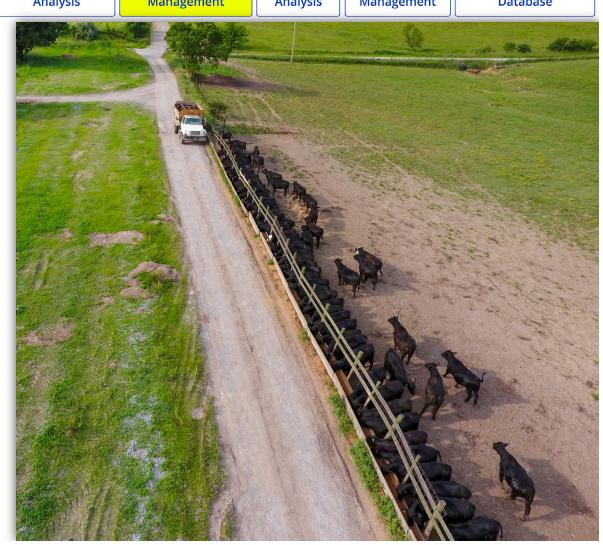
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Financial Analysis Grain Marketing and Management

Investment Analysis Livestock Management

Loan Analysis Risk Management

- Beef ProfitabilityModel
- Cost of Feedstuffs Calculator
- Dairy Profitability Model





Financial Analysis Grain Marketing and Management

Investment Analysis Livestock Management Loan Analysis Risk Management

- Loan Amortization
- Loan Comparison
- Revolving LoanCalculator







Financial Analysis Grain Marketing and Management

Investment Analysis Livestock Management Loan Analysis Risk Management Yield and Land Database

- 2018 Farm Bill What-If Tool
- Crop Insurance Decision Tool
- ECO/SCOPayment Estimator
- Marketing and Crop Insurance Risk Model

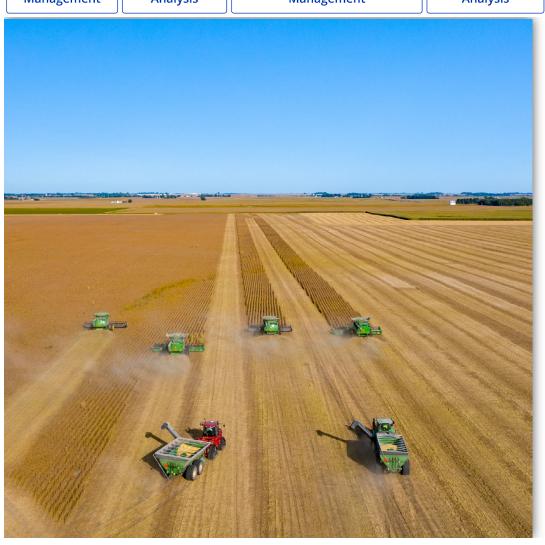




Financial Analysis Grain Marketing and Management

Investment Analysis Livestock Management

Loan Analysis Risk Management Yield and Land Database



- IL Soil Productivity and Yield Utilities
- Yield Risk Evaluator

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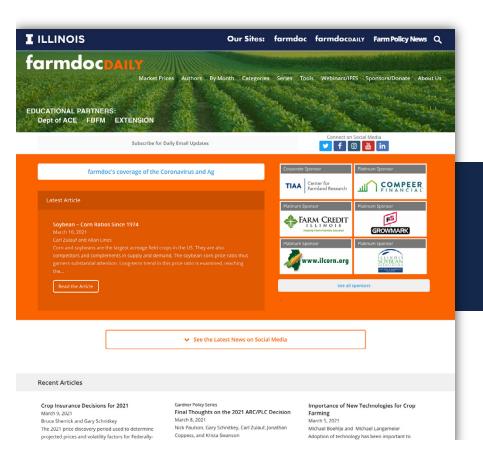






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