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NORTH CENTRAL  
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# **AN ANALYSIS OF SWEAT EQUITY ARRANGEMENTS IN FAMILY FARM SUCCESSION PLANNING**

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# Agenda

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- Topic Introduction
- Research Question & Objectives
- Data & Methods
- Sweat Equity Arrangement Proposals (3)
- Farm Descriptions (3)
- Analysis Example- 1 full example
- Results
- Conclusions

# Topic Introduction

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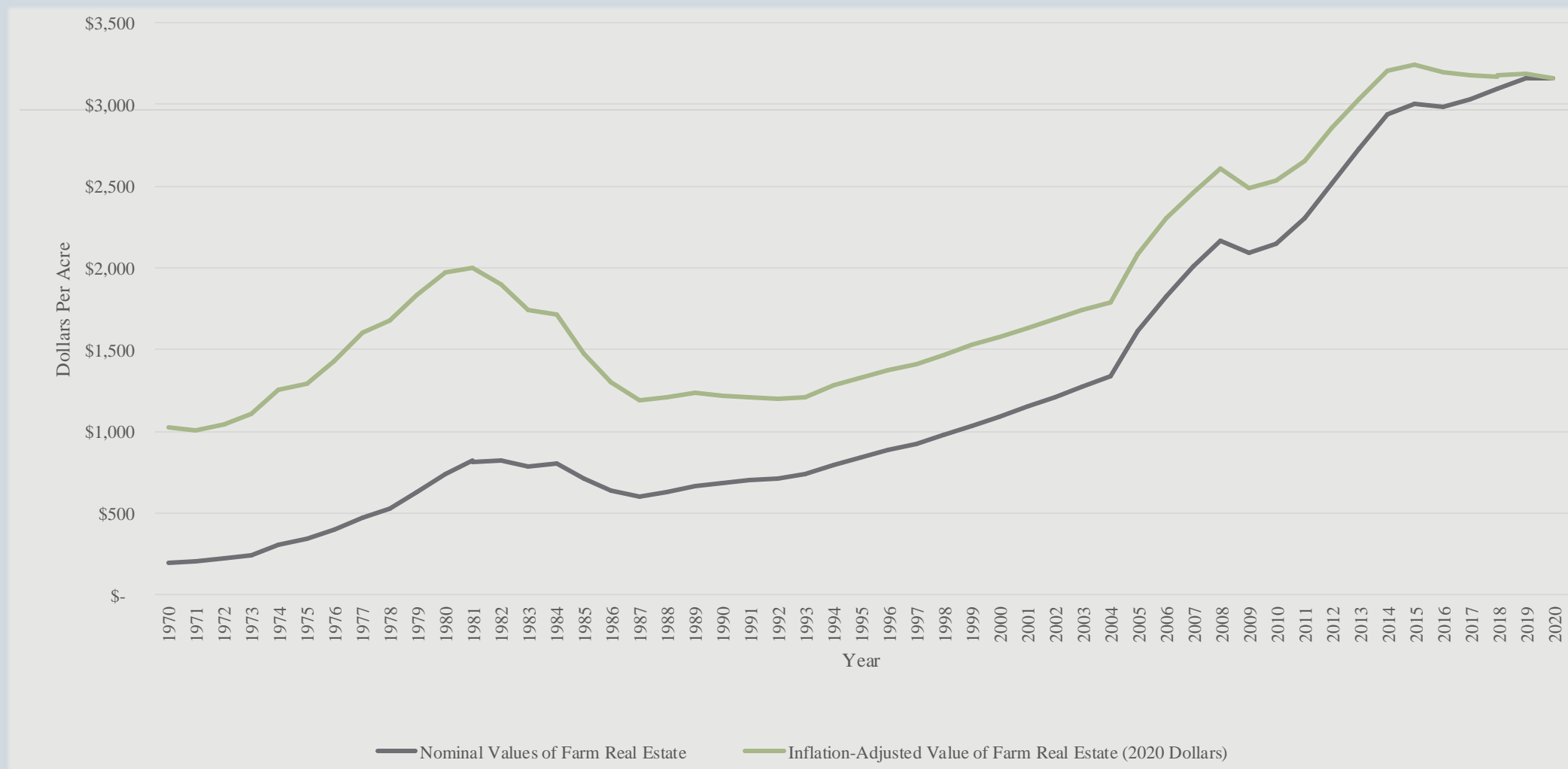
- Many farmers dream of passing farm to children someday
- Only about 30% have an estate plan<sup>1</sup>; even fewer have a full succession plan
  - Estate plan: transition of asset ownership
  - Succession plan: transition of management
    - “Involves a comprehensive long-term business plan and an in-depth outline of the timing regarding transition of each part of the business”<sup>2</sup>
- Farms will transition with or without a plan
- Two goals for successful transition
  - Secure the farm’s financial viability
  - Transition the farm in such a way to make everyone happy<sup>3</sup>

1. Freese, Betsy. 2020. *Tips on Designing a Farm Succession Plan*. 10 9. Accessed 9 18, 2021.

2. Goeller, Dave. 2013. *Transitions in Agriculture: Implications for Research, Data Development and Policy Analysis*. Accessed 2 20, 2022.

3. Grahame, Mason, Dale Johnson, Catherine Onumajuru, and Paul Goeringer. 2018. *Valuing On-Farm Heir’s Sweat Equity is Complicated and Agreements Should be Developed to Fairly Compensate On-Farm Help*. 12. Accessed 10 8, 2021.

## Average U.S. Farm Real Estate Value, Nominal and Inflation-Adjusted 1970-2020



# What is Sweat Equity?

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- Issue that arises when “an on-farm heir receives payment at a below-market rate, and the farm business grows in size due to an on-farm heir’s below-market labors”<sup>1</sup>
- Farm succession continuing to be popular topic
- Sweat equity research continues to be limited

# Goeller Example

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David Goeller, retired Deputy Director of the North Central Risk Management Education Center at the University of Nebraska

- Local farmer in 60s calls to discuss transition plan for farm
- Discovers that caller is son, not father; 90-year-old still runs the farm
- No specific transition plan in place: “Someday this will be yours”
- Father passes; will divides farm equally among eight children
- Son was only child to return to farm
  - No savings
  - No retirement
  - No home

**Sound Familiar?**

# Research Question

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**How can a retiring farmer and heir set up an agreement to ensure that the heir's unpaid efforts will be compensated fairly when the family farm transitions?**



# Research Objectives

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1. Develop three simulation farms
2. Identify three different sweat equity proposals
3. Compare which strategies work best with each farm type

# Data and Methods

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- Kansas Farm Management Association (KFMA) data available for years 2008-2020
- Average age of American farmer at 58<sup>1</sup>
- 12-year model allows for retirement at 70 years of age
- Each scenario has a parent (Owner) generation and child (Heir) generation
  - Each has a spouse that is employed off farm, providing income and benefits
- Simulation Farms
  - Dairy (Swiss Family Dairy)
  - Row Crop (Milo Family Acres)
  - Cow/Calf (Charolais Family Farms)

1. USDA, National Agricultural Statistics Service. 2009. "2007 Census of Agriculture." Accessed 1 23, 2022.

# Swiss Family Dairy Financials Example

**Table 3.1: Swiss Family Dairy Financials 2008-2020**

Year	Net Worth	Gross Inc	Total Exp	Int Exp	Dep Exp	90% OER	DER	IER	NI %	Net Income
2020	\$2,629,442	\$510,344	\$343,065	\$6,144	\$63,579	53.81%	7.47%	0.72%	38.01%	\$193,969
2019	\$2,410,705	\$411,635	\$349,511	\$8,188	\$52,454	65.15%	7.47%	1.31%	26.07%	\$107,304
2018	\$2,207,455	\$327,092	\$310,835	\$10,084	\$52,531	72.00%	7.47%	1.92%	18.62%	\$60,901
2017	\$2,018,595	\$392,507	\$322,473	\$11,844	\$50,210	62.81%	7.47%	2.08%	27.64%	\$108,499
2016	\$1,843,106	\$328,600	\$322,915	\$13,477	\$52,206	75.45%	7.47%	2.75%	14.34%	\$47,109
2015	\$1,680,042	\$453,019	\$372,288	\$14,992	\$48,431	63.98%	7.47%	2.51%	26.04%	\$117,976
2014	\$1,528,522	\$655,077	\$414,897	\$16,399	\$40,624	50.26%	7.47%	2.23%	40.05%	\$262,332
2013	\$1,387,730	\$396,762	\$321,809	\$17,704	\$38,469	62.93%	7.47%	3.67%	25.94%	\$102,909
2012	\$1,256,906	\$407,614	\$340,220	\$18,915	\$33,728	65.84%	7.47%	4.12%	22.57%	\$91,985
2011	\$1,135,344	\$445,054	\$337,510	\$20,038	\$28,738	59.85%	7.47%	4.39%	28.29%	\$125,899
2010	\$1,022,389	\$394,103	\$326,658	\$21,081	\$31,319	64.79%	7.47%	4.94%	22.80%	\$89,875
2009	\$917,430	\$360,164	\$323,230	\$22,049	\$32,435	69.27%	7.47%	5.61%	17.65%	\$63,575
2008	\$819,903	\$455,633	\$367,324	\$21,002	\$34,025	65.84%	7.47%	4.61%	22.09%	\$118,632

Change in Net Worth: \$2,629,442-819,903= **\$1,809,539**

# Proposed Sweat Equity Agreements

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- Two main criteria
  - Is it currently seen in the field?
  - If not, is it realistic to propose?
- Three agreements
  - Percentage Agreement
  - Salary Agreement
  - Hourly Agreement

# (1) Percentage Agreement

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- Net Income is split between Owner and Heir on percentage basis
- Start with small percentage that grows over time
- Allows Heir generation to learn farm management while undertaking risk associated with commodity markets
- Challenges
  - Determining percentage assessed
  - Who owns which assets?
- Simulation
  - Heir starts with 25% with dedicated responsibilities in 2008
  - Annual increase in percentage as responsibilities grow
  - Heir has 75% in 2020

## (2) Salary Agreement

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- Offer annual salary competitive to current off-farm pay
- Liquid cash may not be available each year, so provide non-cash compensation in addition
- Appreciation in assets and farm net worth compete with salary in long-run
- Challenges
  - Heir still needs incentive to make sound financial and management decisions
  - Heir needs to be committed to lifestyle, not just pay
  - Farm still needs to be able to cash flow livable salary
- Simulation
  - Heir starts at KFMA Full-Time Salary of \$32,636<sup>1</sup>
  - 3% annual increase
  - Receives on-farm housing as non-cash compensation
    - Average Salary \$44,091
    - Approx \$12,000 in housing in 2008

# (3) Hourly Agreement

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- Owner pays Heir based on hours put on farm
- As contributions grow, both in time and quality of labor and decisions, compensation rate will increase, as well
- Challenges
  - Determining fair wage
  - Still needs to provide livable wage in addition to deferred wages
- Simulation
  - Heir starts at KFMA wage of \$14.93/hr<sup>1</sup> in 2008
  - 2% annual increase
  - Used Center for Farm Financial Management to assess hours per head/acre per year

# Savings and Farm Reinvestment

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- 20% of income (after farm and family living expenses) put into savings at 5% interest
- Remainder reinvested in farm
- If expenses exceed income, difference subtracted from savings account
- If savings account reaches 0, scenario considered a 'fail' and does not continue to subsequent years



# Swiss Family Dairy Percent Arrangement

**Table 4.1: Swiss Family Dairy Heir Percentage Agreement 2008-2020**

Year	Net Inc	Heir %	Heir NI PreTax	Heir NI After Tax	NonFarm Inc	Household Exp	Final HH Income	Annual Savings	Total Savings	Annual Reinvest	Total Reinvest
2020	\$193,969	75%	\$127,602	\$111,152	\$62,863	\$87,400	\$86,615	\$17,323	\$94,374	\$69,292	\$324,862
2019	\$107,304	71%	\$58,051	\$59,592	\$61,032	\$87,656	\$32,969	\$6,594	\$73,381	\$26,375	\$255,570
2018	\$60,901	67%	\$22,804	\$35,907	\$59,255	\$99,322	\$(4,160)	\$(4,160)	\$63,607	\$-	\$229,195
2017	\$108,499	63%	\$58,787	\$51,103	\$57,529	\$89,428	\$19,204	\$3,841	\$64,540	\$15,363	\$229,195
2016	\$47,109	59%	\$18,306	\$23,465	\$55,853	\$87,987	\$(8,669)	\$(8,669)	\$57,809	\$-	\$213,832
2015	\$117,976	54%	\$54,929	\$48,134	\$54,226	\$90,216	\$12,145	\$2,429	\$63,312	\$9,716	\$213,832
2014	\$262,332	50%	\$122,590	\$98,768	\$52,647	\$82,053	\$69,362	\$13,872	\$57,984	\$55,489	\$204,116
2013	\$102,909	46%	\$38,388	\$40,238	\$67,487	\$74,418	\$33,307	\$6,661	\$42,011	\$26,645	\$148,627
2012	\$91,985	42%	\$29,750	\$32,682	\$65,521	\$79,440	\$18,764	\$3,753	\$33,666	\$15,011	\$121,981
2011	\$125,899	38%	\$38,838	\$40,237	\$71,330	\$65,267	\$46,300	\$9,260	\$28,489	\$37,040	\$106,970
2010	\$89,875	33%	\$21,618	\$25,515	\$69,252	\$63,720	\$31,048	\$6,210	\$18,313	\$24,838	\$69,930
2009	\$63,575	29%	\$10,214	\$15,779	\$74,509	\$59,378	\$30,911	\$6,182	\$11,528	\$24,728	\$45,092
2008	\$118,632	25%	\$21,658	\$18,409	\$72,339	\$65,294	\$25,454	\$5,091	\$5,091	\$20,363	\$20,363

# Swiss Family Dairy Sweat Equity Example

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**Table 4.2 Swiss Family Dairy Percentage Agreement Sweat Equity**

<b>Total Change in Farm Net Worth</b>	<b>\$1,809,540</b>
<b>Heir Contribution</b>	<b>\$908,389</b>
<b>Total Heir Reinvestment</b>	<b>\$324,862</b>
<b>Total Sweat Equity</b>	<b>\$583,527</b>

Change in Net Worth:  $\$2,629,442 - 819,903 = \mathbf{\$1,809,539}$

Heir contributes 50.2% of change:  $\$1,809,539 * 0.502 = \mathbf{\$908,389}$

# Results

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- Swiss Family Dairy
  - Percentage
  - Salary
  - Hourly
- Milo Family Acres
  - Percentage
  - Salary
  - Hourly
- Charolais Family Farms
  - Percentage
  - Salary
  - Hourly

# Swiss Family Dairy Results

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**Table 5.1: Swiss Family Dairy Sweat Equity Agreement Results**

<b>Agreement</b>	<b>Savings</b>	<b>Reinvest</b>	<b>Sweat Equity</b>	<b>Total</b>
Percentage	\$94,374	\$324,862	\$583,527	\$1,002,762
Salary	\$100,795	\$300,778	\$603,992	<b>\$1,005,565</b>
Hourly	\$69,246	\$195,449	\$709,321	\$ 974,016

# Milo Family Acres Results

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**Table 5.2: Milo Family Acres Sweat Equity Agreement Results**

<b>Agreement</b>	<b>Savings</b>	<b>Reinvest</b>	<b>Sweat Equity</b>	<b>Total</b>
Percentage	\$159,725	\$481,045	\$504,644	<b>\$1,145,414</b>
Salary	\$123,385	\$368,820	\$612,942	\$1,105,147
Hourly	\$84,182	\$250,874	\$730,888	\$1,065,944

# Charolais Family Farms Results

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**Table 5.3: Charolais Family Farms Sweat Equity Agreement Results**

<b>Agreement</b>	<b>Savings</b>	<b>Reinvest</b>	<b>Sweat Equity</b>	<b>Total</b>
Percentage	\$120,968	\$367,678	\$32,837	<b>\$521,483</b>
Salary	\$111,041	\$342,521	\$57,995	\$511,556
Hourly	\$77,709	\$230,524	\$169,991	\$478,224

# Conclusions

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- No two transition plans will be the same
- All successful farm transitions
  - Ensure the financial future of the operation
  - Also make sure everyone involved is happy<sup>1</sup>
- Always pay employees what they are worth
  - Cash
  - Non-monetary compensation
  - Unpaid doesn't mean undocumented

# Fair vs Equal

<b>EQUAL</b>	<b>Farm Beg Net Worth</b>	<b>Farm End Net Worth</b>	<b>Net Worth Change</b>	<b>Total</b>
Dairy	\$819,903	\$2,629,443	\$1,809,540	2,629,443
On-Farm Heir		\$1,314,721		\$1,314,721
Off-Farm Heir		\$1,314,721		\$1,314,721

<b>FAIR</b>	<b>Farm Beg Net Worth</b>	<b>Net Worth Change (Heir + Owner)</b>	<b>Total</b>	<b>Equal Value</b>	<b>On-Farm Heir Risk</b>
Dairy	\$819,903	\$1,809,540	\$2,629,443	\$2,629,443	
On-Farm Heir	\$409,952	\$904,770 +\$452,385	\$1,767,107	\$1,314,721	<b>\$452,385</b>
Off-Farm Heir	\$409,951	\$0 +\$452,385	\$862,336	\$1,314,721	



# Fair Vs Equal

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<b>EQUAL</b>	<b>Farm Beg Net Worth</b>	<b>Farm End Net Worth</b>	<b>Net Worth Change</b>	<b>Owner # Children</b>	<b>Sweat Equity</b>	<b>Equal Value</b>	<b>On-Farm Heir Risk</b>
Swiss	\$819,903	\$2,629,443	\$1,809,540	2	\$1,767,106	\$1,314,721	\$452,385
Milo	\$843,782	\$2,807,306	\$1,963,524	2	\$1,894,534	\$1,403,653	\$490,881
Charolais	\$437,887	\$1,238,917	\$801,030	3	\$679,982	\$412,972	\$267,010

# Future Research Opportunities

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- Simulation Models
  - Different farm types
  - Different strategies
  - Different family demographics
  - Endless combinations
- Sweat Equity: Opportunity vs Risk
  - Equity is only beneficial if all stakeholders agree and recognize
  - Otherwise, calculated value can be viewed as risk
- The Opportunity Cost of an Off-Farm Job...On the Farm
  - Many farms likely not near urban areas
  - Advancing technology closing gap

# Questions

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