

How Different Can Appraised Values For The Same Farm Can Be, And Why?

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Research Team

- Iowa Nutrient Research Center Grant.
- Principal Investigator: Alejandro Plastina (ISU)
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- RA: Wendiam Sawadgo (ex-ISU, Auburn Univ. now).
- Collaborators:
 - Jim Jensen (ASFMRA, former ISUEO),
 - Sarah Carlson (Practical Farmers of Iowa)

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Department of Economics | 2

Research Project

- **Goal:** to evaluate the variability of appraised farmland values across appraisers and its causes
- **Output:** paper under review in the Journal of the American Society of Farm Managers and Rural Appraisers:
 - “By how much can appraised farm values differ across appraisers?”

Main Findings

- For each farm, the highest appraised value was between 16 and 22% higher than its lowest appraised value
- Individual appraised values ranged between -11% and +10% of the average appraised values across all appraisers
- Despite being a heavily regulated profession, Certified General Rural Appraisers' subjectivity play a huge role on the appraisal process

Methodology

- We hired 9 Certified General Rural Appraisers (CGRAs)
- To appraise 3 farms in SE Iowa (with written consent of owners)
- At 2 points in time: April 1, 2019 and April 1, 2020
- We compared 54 appraisal reports, ranging from about 30 pages to 50 pages in length each.

The 9 Appraisers

- All Certified General Rural Appraisers (CGRA)
- Randomly selected from list of CGRA in the American Society of Farm Management and Rural Appraisers, across multiple competing real estate companies
- Transmittal letter stated:
 - “Treat as developing a selling price.”
 - Appraisal effective date: April 1st

The 3 Farms

	Farm A	Farm B	Farm C
Size (in acres)	113.4	78.6	69.6
Tillable Area (in acres)	104.7	72.9	65.7
Avg. CSR2 (in points)	87.2	57.8	57.3

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Farm A: 2019 Appraisals, \$ per farm

Appraiser ID	Sales Comparison Approach	Income Approach	Cost Approach	Final Opinion of Value
ID 1	1,179,255	1,152,389	n/a	1,165,000
ID 2	1,091,000	1,110,000	1,060,000	1,091,000
ID 3	1,062,000	1,094,000	n/a	1,070,000
ID 4	1,112,000	1,095,000	1,102,000	1,110,000
ID 5	1,164,500	1,208,100	1,158,800	1,178,600
ID 6	1,250,000	1,245,000	1,250,000	1,250,000
ID 7	1,205,659	1,263,200	n/a	1,206,000
ID 8	1,097,500	1,086,500	1,098,000	1,097,500
ID 9	1,055,925	1,108,792	1,056,122	1,055,925

Farm A: 2019 Appraisals Summary statistics

	Sales Comparison Approach	Income Approach	Cost Approach	Final Opinion of Value
Mean (\$ per farm)	1,135,315	1,151,442	1,120,820	1,136,003
StDev (\$ per farm)	67,545	69,546	73,335	66,617
Range (\$ per farm)	194,075	176,700	193,878	194,075
CoeffVar (%)^	5.9%	6.0%	6.5%	5.9%
Range Percent (%)~	17.1%	15.3%	17.3%	17.1%

^CoeffVar(%) = StDev / Mean * 100 %

~Range Percent (%) = Range / Mean * 100 %

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Farm B: 2019 Appraisals, \$ per farm

Appraiser ID	Sales Comparison Approach	Income Approach	Cost Approach	Final Opinion of Value
ID 1	569,473	579,767	n/a	575,000
ID 2	528,000	520,000	541,000	528,000
ID 3	510,000	529,000	n/a	515,000
ID 4	538,000	532,000	543,000	538,269
ID 5	541,900	521,300	545,500	535,400
ID 6	515,000	540,000	510,000	525,000
ID 7	491,909	483,522	n/a	492,000
ID 8	483,500	463,000	489,000	483,500
ID 9	492,000	486,110	476,743	492,000

Farm B: 2019 Appraisals Summary statistics

	Sales Comparison Approach	Income Approach	Cost Approach	Final Opinion of Value
Mean (\$ per farm)	518,865	517,189	517,541	520,463
StDev (\$ per farm)	28,138	35,100	30,054	28,741
Range (\$ per farm)	85,973	116,767	68,757	91,500
CoeffVar (%)^	5.4%	6.8%	5.8%	5.5%
Range Percent (%)~	16.6%	22.6%	13.3%	17.6%

^CoeffVar(%) = StDev / Mean * 100 %

~Range Percent (%) = Range / Mean * 100 %

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Farm C: 2019 Appraisals, \$ per farm

Appraiser ID	Sales Comparison Approach	Income Approach	Cost Approach	Final Opinion of Value
ID 1	504,673	521,070	n/a	515,000
ID 2	476,000	476,000	493,000	476,000
ID 3	445,000	459,000	n/a	450,000
ID 4	501,000	504,000	484,000	501,192
ID 5	475,700	475,100	475,600	475,500
ID 6	435,000	465,000	435,000	450,000
ID 7	460,327	445,217	n/a	460,000
ID 8	455,500	445,500	458,000	455,500
ID 9	444,500	450,000	441,620	444,500

Farm C: 2019 Appraisals Summary statistics

	Sales Comparison Approach	Income Approach	Cost Approach	Final Opinion of Value
Mean (\$ per farm)	466,411	471,210	464,537	469,744
StDev (\$ per farm)	24,799	26,395	23,459	24,556
Range (\$ per farm)	69,673	75,853	58,000	70,500
CoeffVar (%)^	5.3%	5.6%	5.1%	5.2%
Range Percent (%)~	14.9%	16.1%	12.5%	15.0%

^CoeffVar(%) = StDev / Mean *100 %

~Range Percent (%) = Range / Mean *100 %

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Table 5. Comparison of Salient Features of 2019 Appraisal Reports for Farm A

Items in report	Appraiser								
	ID 1	ID 2	ID 3	ID 4	ID 5	ID 6	ID 7	ID 8	ID 9
Effective Date of Appraisal	4/1/2019	4/1/2019	4/1/2019	4/1/2019	4/1/2019	4/1/2019	4/1/2019	4/1/2019	4/1/2019
Property inspected	6/13/2019	n/a	6/3/2019	5/1/2019	4/20/2019	4/16/2019	5/28/2019	5/14/2019	5/12/2019
Report Signed	6/24/2019	6/22/2019	6/13/2019	7/3/2019	7/10/2019	6/5/2019	6/5/2019	5/28/2019	5/30/2019
Valuation Approaches	S, I	S, I, C	S, I	S, I, C	S, I, C	S, I, C	S, I	S, I, C	S, I, C
Comments to Value	FS, AI	FS, AI	FS	FS	FS, UOI	FS	FS	FS	FS
Followed USPAP	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Personal Inspection	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sales Research & Report Preparation by Self?	No	As team (2)	Yes	Yes	Yes	Yes	Yes	Yes	Yes (with help of others to collect data).
Info used by Appraiser	AM, SM, P	AM, SM, P, LM	AM, SM	AM, SM, P	AM, SM, P	AM, SM, P	AM, SM, P	AM, SM, P	AM, SM

Table 5. Comparison of Salient Features of 2019 Appraisal Reports for Farm A

Items in report	Appraiser								
	ID 1	ID 2	ID 3	ID 4	ID 5	ID 6	ID 7	ID 8	ID 9
Extraordinary assumptions	None	None	Date adjustment only	Acreage measurements used in the Addendum are approximate	Property in same condition on date inspected as on effective date	Date adjustment only	Property in same condition on date inspected as on effective date	Property in same condition on date inspected as on effective date	Date adjustment only
Hypothetical assumptions	None	None	None	None	None	None	None	None	None
Exposure time (pre-valuation), in months	3-6	1-3	1-4	6-9	3-6	2-4	3	6	n/a
Marketing time (post-valuation), in months	3-6	1-3	n/a	6-9	n/a	2-4	3	6	2
Total net/taxable acres	112.31	111.78	111.78	112.31	111.78	111.80	111.78	111.78	117.00
Tillable acres	92.61	111.60	106.73	107.00	106.73	106.30	106.73	103.53	106.73
CSR2 rating on tillable acres	88.5	87.2	86.1	85.9	86.7	86.9	89	84.5	85.9 CSR (previous version)

Items in report	Appraiser								
	ID 1	ID 2	ID 3	ID 4	ID 5	ID 6	ID 7	ID 8	ID 9
Topography description	Rolling	Rolling, undulating	Gently sloping topography	Surface water drains to the open ditch in the middle from both sides	From nearly level to gently sloping to moderately sloping	Mostly level with a slight slope to the creek. The slopes range from 0% to 9%	Ranges from nearly level to rolling	From nearly level to gently rolling	Level to gently rolling with waterways
Number of Comparable Subjects and County	3 Washington, 1 Johnson (All different from comps for B and C)	2 Washington, 1 Keokuk (All different from comps for B and C)	6 Washington (All different from comps for B and C)	2 Washington, 3 Johnson (1 comp same as for B and C)	3 Washington, 2 Keokuk (All different from comps for B and C)	1 Washington, 3 Keokuk (1 comp same as for B and C)	2 Washington, 3 Keokuk (All different from comps for B and C)	5 Washington (Same comps for 3 farms)	4 Washington (All different from comps for B and C)
Value adjustments to at least one of the comparable properties:	CSR2, Land mix adj.	CSR2, Land mix adj.	Farming ease-internal barriers	Improvements, Land quality	Flood Zone, CSR2, Other (time of sale), Farming ease-internal barriers, Location, Tillable adj., CRP adj.	Time of sale, Land quality, Motivation (adjoining)	Time of sale, Land mix adj., Efficiency	Time of sale, Improvements, Land quality	Time of sale, Location & access, Land quality, Tillable adj., Term adj.

Table 5. Comparison of Salient Features of 2019 Appraisal Reports for Farm A

Items in report	Appraiser								
	ID 1	ID 2	ID 3	ID 4	ID 5	ID 6	ID 7	ID 8	ID 9
Estimated Gross Income per Acre	\$30,188	\$30,953	\$27,000	\$32,170	\$30,381	\$29,523	\$32,077	\$31,981	\$34,389
Estimated expenses as % of Gross Income	Real estate tax (11.9%) and insurance (0.3%) only.	Real estate tax (11.6%), insurance (0.5%), maintenance (0.5%), and management (5%)	Real estate tax only (13.5%)	Real estate tax (11.2%), insurance (0.6%), and maintenance (3.1%); no management expense	Real estate tax (11.8%), insurance (0.7%), maintenance (6%), and management (8%)	Real estate tax (12.1%), insurance (0.5%), maintenance (3.8%), and management (8%)	Real estate tax (11.2%), insurance (0.3%), maintenance (1.7%), and management (8%)	Real estate tax (11.2%), insurance (0.9%), maintenance (1.7%), and management (8%)	Real estate tax (10.4%), insurance (0.2%), and management (4%); no maintenance expense
Capitalization Rate	2.30%	2.30%	2.10%	2.50%	1.80%	1.79%	2.00%	2.30%	2.65%

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Department of Economics | 17

Farm A: 2020 Appraisals, \$ per farm

Appraiser ID	Sales Comparison Approach	Income Approach	Cost Approach	Final Opinion of Value
ID 1	1,212,948	1,142,129	n/a	1,180,000
ID 2	1,067,000	1,050,000	1,067,000	1,067,000
ID 3	1,240,000	1,236,000	n/a	1,240,000
ID 4	1,319,000	1,152,000	1,303,000	1,260,000
ID 5	1,179,300	1,181,500	1,180,900	1,180,400
ID 6	1,193,000	1,208,000	1,211,000	1,200,000
ID 7	1,205,994	1,236,286	n/a	1,206,900
ID 8	1,176,000	1,174,500	1,177,500	1,176,000
ID 9	1,193,400	1,007,500	1,073,980	1,193,400

Farm A: 2020 Appraisals Summary statistics

	Sales Comparison Approach	Income Approach	Cost Approach	Final Opinion of Value
Mean (\$ per farm)	1,198,516	1,154,213	1,168,897	1,189,300
StDev (\$ per farm)	65,889	79,065	88,732	53,979
Range (\$ per farm)	252,000	228,786	236,000	193,000
CoeffVar (%)^	5.5%	6.9%	7.6%	4.5%
Range Percent (%)~	21.0%	19.8%	20.2%	16.2%

^CoeffVar(%) = StDev / Mean * 100 %

~Range Percent (%) = Range / Mean * 100 %

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Farm B: 2020 Appraisals, \$ per farm

Appraiser ID	Sales Comparison Approach	Income Approach	Cost Approach	Final Opinion of Value
ID 1	546,070	575,488	n/a	560,000
ID 2	520,000	497,000	497,000	520,000
ID 3	550,000	550,000	n/a	550,000
ID 4	562,000	550,000	551,000	553,871
ID 5	539,100	532,200	533,000	535,500
ID 6	515,000	527,000	531,000	522,000
ID 7	468,220	469,120	n/a	468,000
ID 8	515,000	493,500	515,500	515,000
ID 9	488,000	506,255	502,310	488,000

Farm B: 2020 Appraisals Summary statistics

	Sales Comparison Approach	Income Approach	Cost Approach	Final Opinion of Value
Mean (\$ per farm)	522,599	522,285	521,635	523,597
StDev (\$ per farm)	30,420	33,613	20,480	30,676
Range (\$ per farm)	93,780	106,368	54,000	92,000
CoeffVar (%)^	5.8%	6.4%	3.9%	5.9%
Range Percent (%)~	17.9%	20.4%	10.4%	17.6%

^CoeffVar(%) = StDev / Mean * 100 %

~Range Percent (%) = Range / Mean * 100 %

Farm C: 2020 Appraisals, \$ per farm

Appraiser ID	Sales Comparison Approach	Income Approach	Cost Approach	Final Opinion of Value
ID 1	487,270	516,884	n/a	500,000
ID 2	476,000	454,000	453,000	476,000
ID 3	496,000	483,500	n/a	495,000
ID 4	519,000	528,000	522,000	522,075
ID 5	477,500	478,600	464,700	475,500
ID 6	440,000	456,000	452,000	448,000
ID 7	460,327	445,217	n/a	427,000
ID 8	479,500	474,500	483,000	479,500
ID 9	472,500	478,500	456,040	472,500

Farm C: 2020 Appraisals Summary statistics

	Sales Comparison Approach	Income Approach	Cost Approach	Final Opinion of Value
Mean (\$ per farm)	478,677	479,467	471,790	477,286
StDev (\$ per farm)	22,022	27,772	27,165	27,962
Range (\$ per farm)	79,000	82,783	70,000	95,075
CoeffVar (%)^	4.6%	5.8%	5.8%	5.9%
Range Percent (%)~	16.5%	17.3%	14.8%	19.9%

^CoeffVar(%) = StDev / Mean * 100 %

~Range Percent (%) = Range / Mean * 100 %

Linear Correlation between Valuation Approach and Final Value Opinion

	Sales Comparison Approach	Income Approach	Cost Approach
	Year 2019		
Farm A	99%	92%	98%
Farm B	99%	95%	92%
Farm C	97%	94%	85%
	Year 2020		
Farm A	95%	52%	78%
Farm B	98%	91%	82%
Farm C	89%	89%	91%
	Years 2019-2020		
Farm A	98%	66%	88%
Farm B	98%	93%	87%
Farm C	92%	91%	88%

Table 6. Differences in Appraisal Reports between 2020 and 2019 for Farm A

Items in report	Appraiser								
	ID 1	ID 2	ID 3	ID 4	ID 5	ID 6	ID 7	ID 8	ID 9
Effective Date of Appraisal	4/1/2020	4/1/2020	4/1/2020	4/1/2020	4/1/2020	4/3/2020	4/1/2020	4/1/2020	4/1/2020
Property inspected	6/26/2020	n/a	6/3/2019	5/29/2020	4/30/2020	4/3/2020	5/12/2020	5/22/2020	4/17/2020
Report Signed	9/1/2020	6/12/2020	6/10/2020	6/4/2020	6/26/2020	5/8/2020	5/22/2020	6/3/2020	6/8/2020
Sales Research & Report Preparation by Self?	Yes	As team (2)	Yes	Yes	Yes	Yes	Yes	Yes	Yes (with help of others to collect data)
Extraordinary assumptions	None	None	Date adjustment only	Acreage measurements used in the Addendum are approximate	Property in same condition on date inspected as on effective date	Date adjustment only	Property in same condition on date inspected as on effective date. Market not impacted significantly by COVID.	Property in same condition on date inspected as on effective date. No direct record searches. [^]	Departure provision: did not include a comparison grid for comparable sales approach.*

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Table 6. Differences in Appraisal Reports between 2020 and 2019 for Farm A

Items in report	Appraiser								
	ID 1	ID 2	ID 3	ID 4	ID 5	ID 6	ID 7	ID 8	ID 9
Sales Research & Report Preparation by Self?	Yes	As team (2)	Yes	Yes	Yes	Yes	Yes	Yes	Yes (with help of others to collect data)
Exposure time (pre-valuation), in months	3-6	1-3	1-4	6-12	6-12	2-4	3	6	n/a
Marketing time (post-valuation), in months	3-6	1-3	n/a	6-12	n/a	2-4	3	6	3
Total net/taxable acres	112.31	111.78	111.78	111.78	111.78	111.78	111.78	111.78	117
Tillable acres	92.61	101.42	106.73	106.47	106.11	106.28	106.73	103.53	106.73
Number of Comparable Subjects and County	1 Washington, 2 Johnson (All different from comps B and C)	2 Washington, 3 Johnson (All different from comps for B and C)	5 Washington (Same as comps for C, 1 different from comps for B)	5 Washington (All different from comps for B and C)	3 Washington, 2 Keokuk (All different from comps for B and C)	3 Washington, 1 Keokuk (All different from comps for B and C)	2 Washington, 3 Keokuk (All different from comps for B and C)	5 Washington (Same comps for 3 farms)	4 Washington, no comparison grid (Same comps for 3 farms)

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Items in report	Appraiser								
	ID 1	ID 2	ID 3	ID 4	ID 5	ID 6	ID 7	ID 8	ID 9
Value adjustments:	CSR2, Land mix adj.	Time of sale, Land mix adj., Changing market conditions	Access to field, Farming ease-internal barriers, Drainage	Tract size, Improvements, Land quality	Flood Zone, CSR2, Farming ease-internal barriers, Tillable adj., Soil quality adj., CRP Adj	Land quality, Motivation (adjoining)	Time of sale, Land mix adj., Efficiency	Land quality	Not applicable
Estimated Gross Income per Acre	\$30,188	\$28,398	\$32,154	\$29,845	\$30,207	\$29,333	\$33,004	\$32,691	\$32,806
Estimated expenses as % of Gross Income	Real estate tax (12.6%), insurance (0.3%), no maintenance or management charge	Real estate tax (12.6%), insurance (0.5%), maintenance (0.5%), management (5%)	Real estate tax only (11.6%)	Real estate tax (12.4%), insurance (0.7%), and maintenance (2%); no management expense	Real estate tax (12.4%), insurance (0.7%), maintenance (6.6%), and management (8%)	Real estate tax (12.7%), insurance (0.5%), maintenance (3.8%), and management (8%)	Real estate tax (11.3%), insurance (0.3%), maintenance (1.7%), and management (8%)	Real estate tax (11.4%), insurance (0.9%), maintenance (1.7%), and management (8%)	Real estate tax (11.4%), insurance (0.2%), management (4%); no maintenance expense
Capitalization Rate	2.30%	2.20%	2.30%	2.20%	1.80%	1.82%	2.10%	2.17%	2.75%

Notes: n/a: not available.
 ^ The Washington Co. Courthouse was shut down for a few months before the date of the appraisal and no direct search could be made of their records and data.
 * Very few sales in the area, impossibility to access records due to Covid-19. Instead of using a comparison grid, the appraiser proved occurrence of sale and discussed adjustments in a narrative form.

Concluding Comments

- To the best of our knowledge, this is the first study to compare real appraisals of farms across multiple CGRAs.
- Our findings confirm that despite the norms and regulations that CGRAs abide by, the appraisal process is subjective in nature and the appraised value of a farm in Iowa at a particular point in time can be very different across CGRAs.
- The observed discrepancies in basic facts considered by CGRAs throughout the appraisal process, such as tillable acres and productivity indexes, were non-trivial.

Practical Implications

- If you disagree with an appraisal report, you can contest it or...
- ...get another appraiser to do a new appraisal (the new appraised value can be very different from the first one)
- Shopping around might pay off.



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What questions do you have?

Thank you for your attention!

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