



United States Department of Agriculture

Access to Farmland for Beginning and Socially Disadvantaged Farmers

Scott Callahan and Daniel Hellerstein
USDA Economic Research Service

The findings and conclusions in this presentation are those of the authors and should not be construed to represent any official USDA or U.S. Government determination or policy



Motivation

- Congress requested a study on access to farmland for both beginning and socially disadvantaged farmers and ranchers (Sec. 12607).
- Congress requested we study two topics.
 - Barriers to entry for beginning and socially disadvantaged farmers.
 - Effect of federal programs (including ACEP, land transition and financing programs) on farmland access, tenure, transition and succession for beginning and socially disadvantaged farmers.
- This presentation contains preliminary statistics from this research.



Data Sources

- 2017 Census of Agriculture
 - Percentage of beginning farmer operations.
 - Percentage of socially disadvantaged farming operations.
 - Percentage of cropland acres.
 - Land value per acre.
- 2014 Tenure, Ownership, and Transition of Agricultural Land (TOTAL) survey
 - Total amount of land rented out.
 - Average size of a lease.
 - Percentage of leases renewed annually.
- USDA Race, Ethnicity, and Gender Program Statistics (Regstats)
 - Percentage of SDA participation in FSA loan programs.
- USDA Farm Services Agency (FSA)
 - Agriculture Risk Coverage (ARC) and Price Loss Coverage (PLC) program payments per acre.
 - Percentage of cropland enrolled in the Conservation Reserve Program.
- USDA Risk Management Agency (RMA)
 - Indemnities and total premium per acre.
- USDA National Resources Conservation Service (NRCS)
 - Percentage of cropland enrolled in the agricultural conservation easement program (ACEP).



Data Limitations

- Data are aggregated to the county level.
- We only know county totals, and don't know the values of individual variables specifically for beginning and socially disadvantaged farmers.
- We only have one year of data for land access variables from the TOTAL survey.
- We therefore stress that the subsequent analysis, while “suggestive”, is not “causal.”
- It should be thought of as measuring correlations, rather than causal effects.

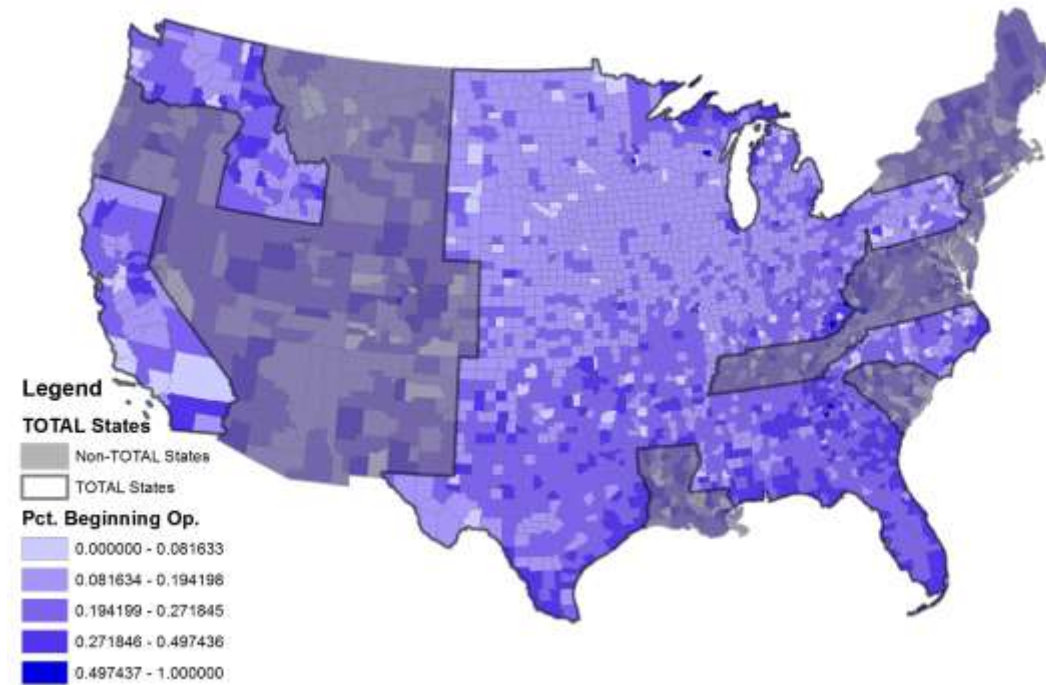


Dependent Variable Definitions

- Beginning Farm Share of County's Total Farm Operations
 - We classify an operation as a beginning operation if all operators have ten or fewer years of experience.
- Socially Disadvantaged Farm Share of County's Total Farm Operations
 - We classify an operation as SDA if the operation has at least one non-white or Hispanic operator.



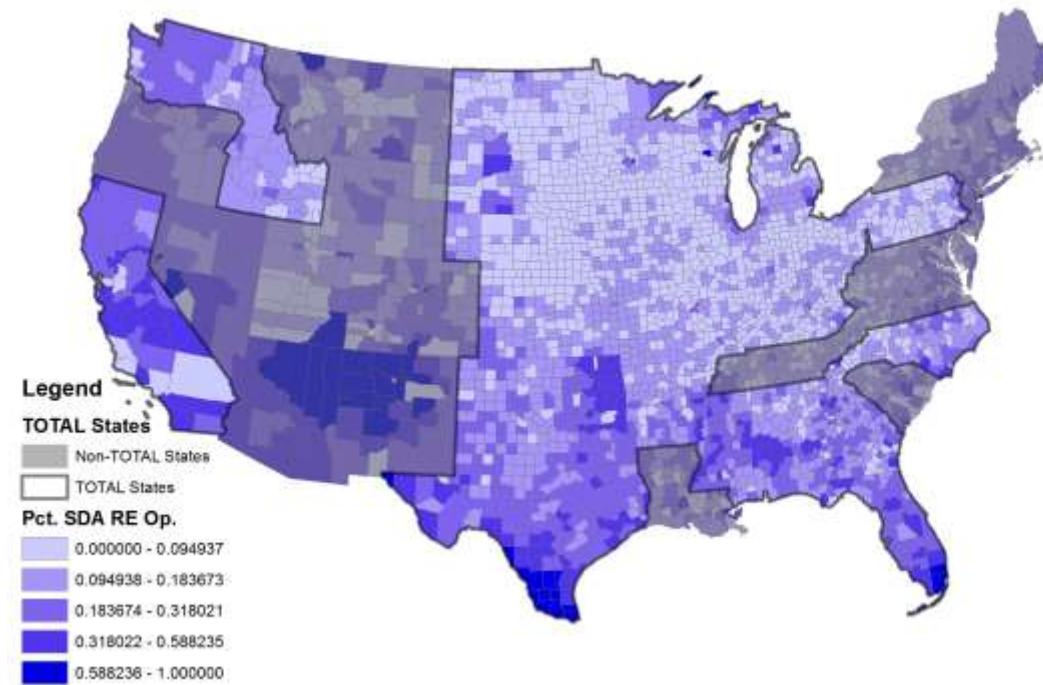
Distribution of Beginning Operations



Source: 2017 Census of Agriculture.



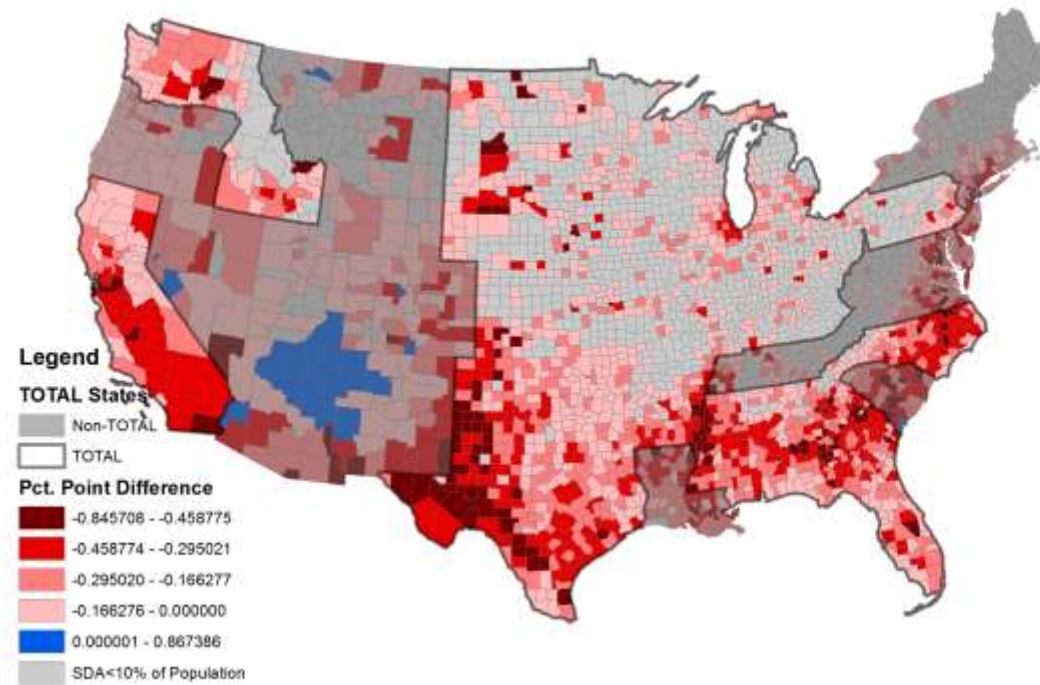
Distribution of Socially Disadvantaged Operations



Source: 2017 Census of Agriculture.



Percentage Point Difference Between SDA Population and SDA Operators



Source: 2017 Census of Agriculture and 2017 American Community Survey.



Survey/Census Descriptive Statistics

Dependent Variables	Source	Mean	Median	St. Dev.
Percentage of Beginning Operations	2017 Ag Census	21.49%	20.24%	6.48%
Percentage of Socially Disadvantaged Operations	2017 Ag Census	15.60%	11.21%	11.20%

Land Access Measures	Source	Mean	Median	St. Dev.
Percentage of Land Transferring in Five Years	2014 TOTAL	15.61%	0.00%	0.46%
Percentage of Land Transferring in Five Years to Non-Family Members	2014 TOTAL	3.01%	0.00%	0.18%
Percentage of Land Leased	2014 TOTAL	52.22%	67.99%	0.43%
Acres of Land Leased	2014 TOTAL	94.030	11.039	2.256
Percentage of Leased Land on Annual Contracts	2014 TOTAL	70.55%	29.13%	0.56%
Average Landlord/Tenant Relationship Length	2014 TOTAL	10.707	8.170	0.089



Administrative Data Descriptive Statistics

Variable	Source	Mean	Median	St. Dev.
Percentage of SDA DLP/GLP Loan Applications Accepted	2017 FSA Regstats	75.77%	80.00%	26.84%
Percentage of All Direct and Guaranteed Loan Program (DLP/GLP) Applications Accepted	2017 FSA Regstats	75.36%	75.41%	12.19%
Percentage of Cropland Enrolled in General Signup Conservation Reserve Program (CRP)	2014-2017 FSA	3.53%	0.54%	6.21%
Percentage of Cropland Enrolled in Continuous Signup Conservation Reserve Program (CRP)	2014-2017 FSA	1.98%	0.59%	2.71%
Percentage of Cropland Enrolled in Conservation Reserve Program Transition Incentive Program (CRP-TIP)	2014-2017 FSA	0.04%	0.00%	0.11%
Percentage of Cropland Enrolled in the Agricultural Conservation Easement Program (ACEP)	Origin-2017 NRCS	0.10%	0.00%	1.01%



Regression Results: Beginning Farm Share of County's Total Farm Operations

Root MSE	0.43894	
R-Squared	0.03834	

Variable	Estimate	Std. Error
Intercept	0.22533	(0.04352)***
Percentage of Leases Renewed Annually	0.00271	(0.00298)
Log of Average Lease Size	0.00019	(0.00158)
Log of Total Leased Land	-0.00222	(0.00117)
Percentage of Cropland Acres	-0.01503	(0.01146)
Percentage of Cropland Acres Enrolled in General Signup CRP	-0.03287	(0.01819)
Percentage of Cropland Acres Enrolled in Continuous Signup CRP	-0.06019	(0.06242)
Percentage of Cropland Enrolled in CRP-TIP	-0.12372	(0.68483)
Log of Landvalue Per Acre	-0.00034	(0.00433)
Percentage of Cropland Acres Enrolled in ACEP	0.16015	(0.21055)
Percentage of Farmland to be Transferred to Non-Family Members	0.00057	(0.00951)
Logarithm of Average Landlord/Tenant Relationship Length	0.00110	(0.00138)
Percentage Change in Population	0.06417	(0.04572)
Percentage of All DLP/GLP Loan Applications that are Granted	-0.02268	(0.01639)
Log of ARC/PLC Payments Per Acre	0.00018	(0.00092)
Log of Crop Insurance Indemnity Payments Per Acre	0.00111	(0.00251)
Log of Total Crop Insurance Premium Per Acre	0.00193	(0.00399)
Percentage of Sales in Field Crops	-0.02139	(0.01177)
Percentage of Sales in Specialty Crops	-0.00148	(0.02150)
Percentage of Sales in Livestock	-0.03183	(0.01210)**
Percentage of Direct-to-Consumer Sales	0.31832	(0.10948)**



Regression Results: Socially Disadvantaged Farm Share of County's Total Farm Operations

Root MSE	0.62977
R-Square	0.05815

Variable	Estimate	Std. Error
Intercept	0.01251	(0.08842)
Percentage of Leases Renewed Annually	0.00084	(0.00637)
Log of Average Lease Size	-0.00619	(0.00266)*
Log of Total Leased Land	0.00141	(0.00109)
Percentage of Cropland Acres	-0.06450	(0.02165)**
Percentage of Cropland Acres Enrolled in General Signup CRP	0.04746	(0.05273)
Percentage of Cropland Acres Enrolled in Continuous Signup CRP	0.19555	(0.10349)
Percentage of Cropland Enrolled in CRP TIP	-0.62706	(0.51017)
Log of Landvalue Per Acre	0.01878	(0.01321)
Percentage of Cropland Acres Enrolled in ACEP	0.03045	(0.13941)
Percentage of Farmland to be Transferred to Non-Family Members	0.02514	(0.03552)
Logarithm of Average Landlord/Tenant Relationship Length	-0.00540	(0.00285)*
Percentage Change in Population	-0.05675	(0.03346)
Percentage of Total Population that is SDA	0.28466	(0.03866)***
Percentage of SDA DLP/GLP Loan Applications that are Granted	0.01106	(0.00465)**
Log of Average Landlord/Tenant Relationship Length	0.00109	(0.00365)
Log of Crop Insurance Indemnity Payments Per Acre	0.00439	(0.00415)
Log of Total Crop Insurance Premium Per Acre	-0.00181	(0.00580)
Percentage of Sales in Field Crops	-0.06578	(0.02323)**
Percentage of Sales in Specialty Crops	-0.04878	(0.03729)
Percentage of Sales in Livestock	-0.07871	(0.02168)***
Percentage of Direct to Consumer Sales	0.23779	(0.15259)



Conclusions

- We find no evidence that our measures of land access are correlated with the percentage of beginning farming operations.
- We do find evidence that our land access measures are correlated with the percentage of SDA farming operations.
 - Negative statistical associations include average lease size, percentage of cropland acres and average landlord/tenant relationship length.
 - This suggests that SDA operations maybe crowded out in counties with larger leases and long-standing leasing arrangements.
 - Positive statistical associations include percentage of total population that is SDA, and the percentage of successful FSA loan applications by SDA operators.

