

Exploring Value-Added Agriculture Opportunities in Missouri

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What are specialty crops?



Highest Sales

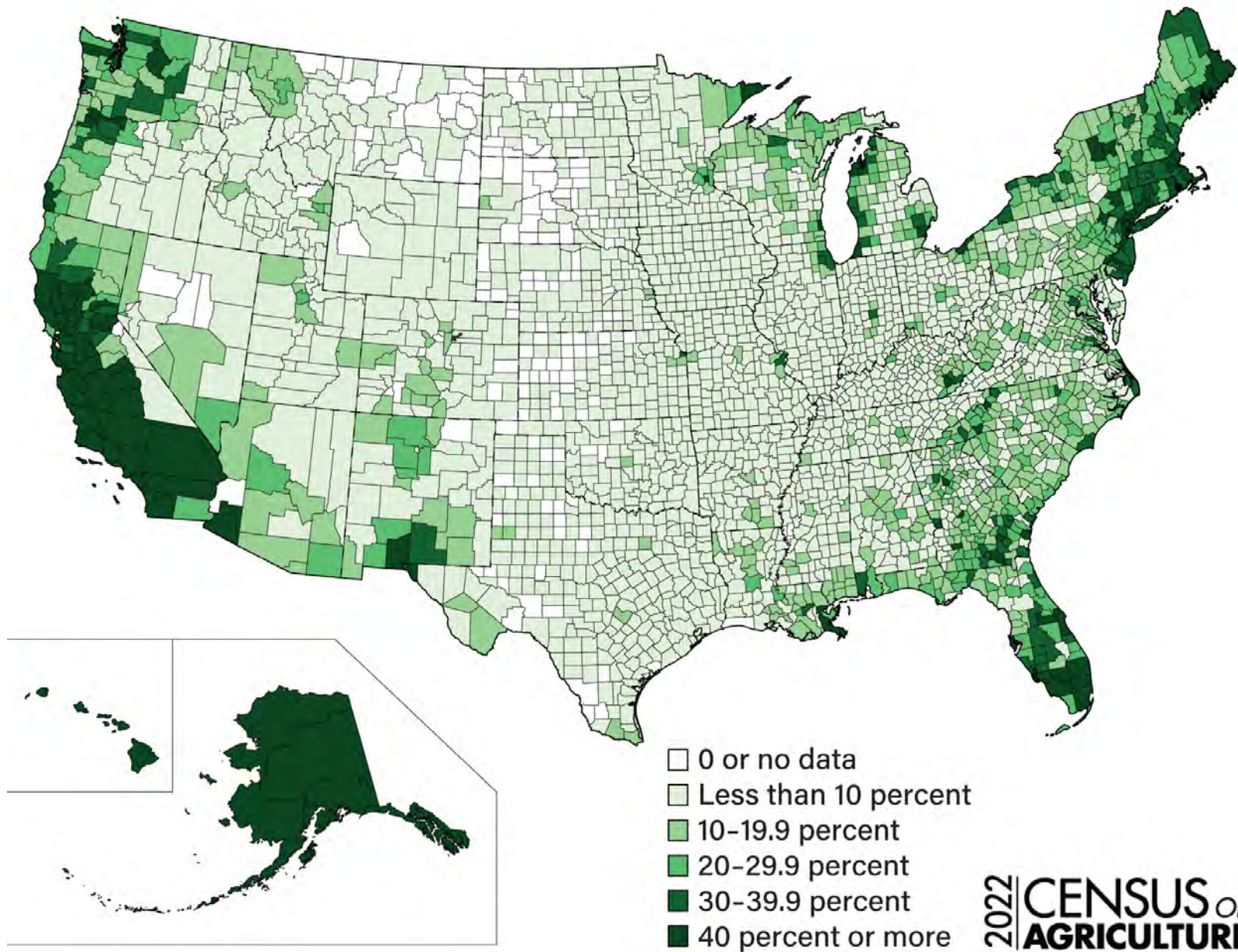


Highest # of farms



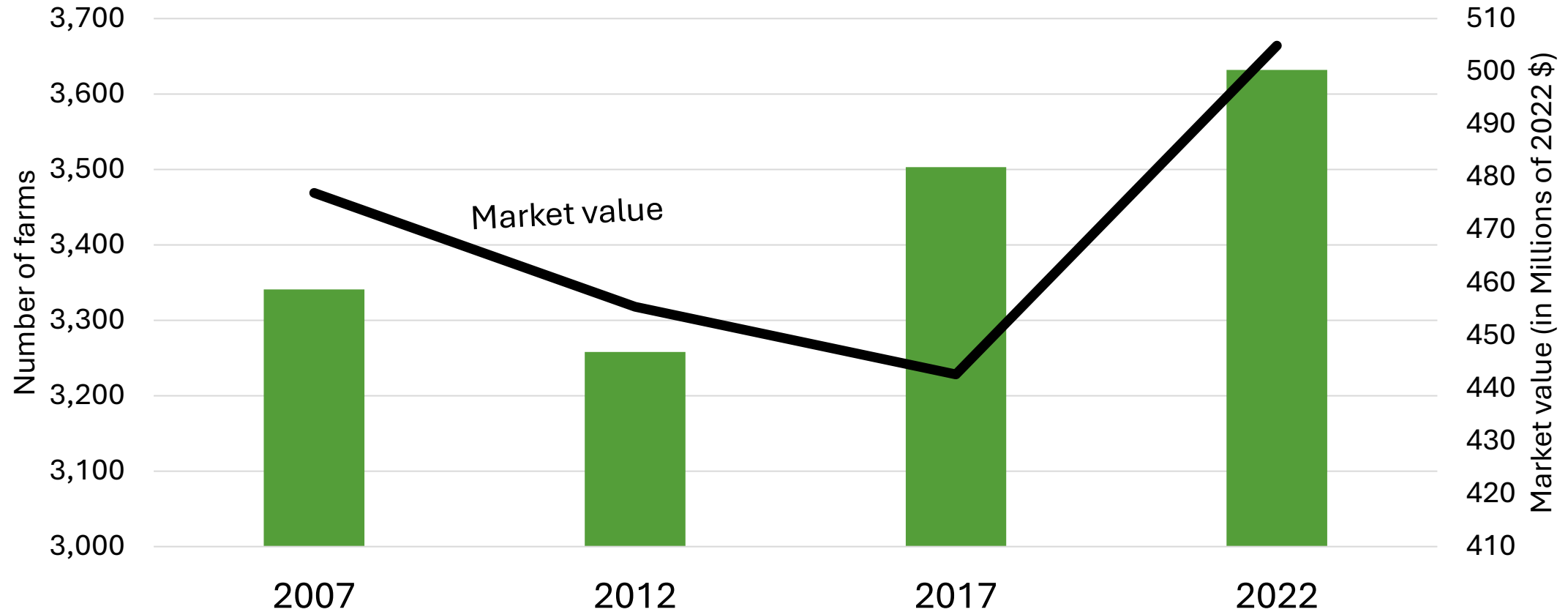
Highest # of acres

Share of Farms that Primarily Grow Specialty Crops



Source:
USDA ERS

Missouri Specialty Crops Trending Up in Farms, Value



Source: USDA NASS
nass.usda.gov/AgCensus

Missouri Specialty Crops, 2022

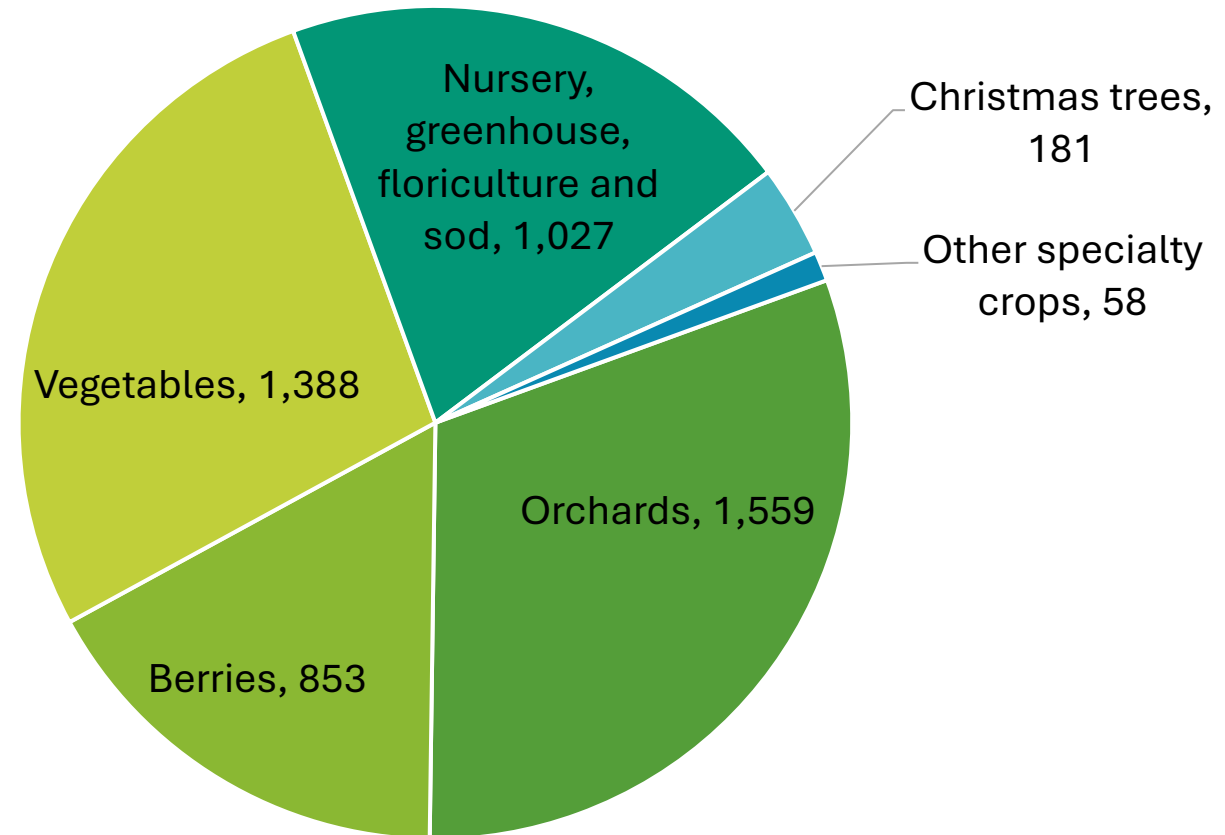
Farms with Specialty Crop Sales

All Missouri specialty crops

3,632 farms

44,630 acres (20,932 irrigated acres)

\$505 million in sales





Missouri Fruit Industry

Top Missouri fruit crops and industry totals, 2022

Category	Farms	Five-year change (%)	Acres	Five-year change (%)
Apples	533	2.6%	1,403	1.6%
Grapes	422	6.0%	1,962	5.8%
Peaches	412	18.1%	1,276	(2.2%)
Pears	315	23.0%	122	25.8%
All fruit	1,104	11.0%	4,939	N/A

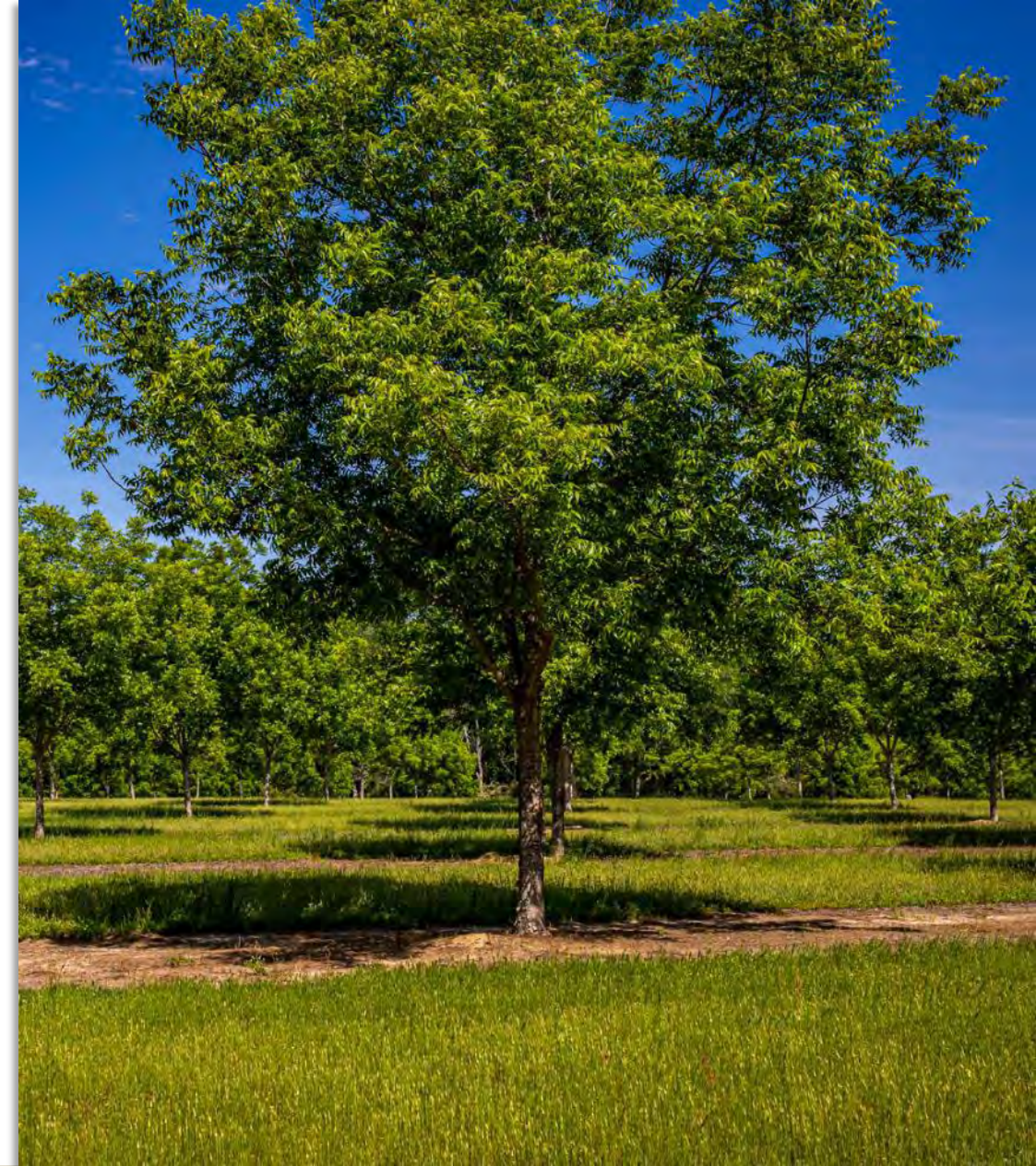
Source: USDA NASS
nass.usda.gov/AgCensus

Missouri Nut Industry

Top Missouri nut crops and industry totals

Category	Farms	Five-year change (%)	Acres	Five-year change (%)
Chestnuts	115	94.9%	391	173.4%
Pecans (<i>improved</i>)	157	19.8%	2,524	(6.3%)
Pecans (<i>native</i>)	296	13.4%	7,194	15.0%
Walnuts	141	9.3%	526	4.6%
All nuts	659		11,206	

Approximately 45 percent of the Missouri nut farmers have 15 acres or more in nut production





Missouri Berry Industry

Top Missouri berry crops and industry totals, 2022

Category	Farms	Five-year change (%)	Acres	Five-year change (%)
Blackberries	364	(18.6%)	225	(26.7%)
Blueberries	234	0.9%	217	(12.5%)
Elderberries	186	116.3%	607	64.5%
Strawberries	218	(1.4%)	85	(50.3%)
All berry	853	N/A	1,218	N/A

About 48% of Missouri berry crop acres are irrigated.

Source: USDA NASS
nass.usda.gov/AgCensus

Missouri Crops under Protection

Top Missouri crops under protection, 2022

Category	Farms	Five-year change (%)	Square feet (million)	Five-year change (%)
Floriculture and bedding crops	379	(5.3%)	5.2	(26.0%)
Tomatoes	354	19.2%	2.1	19.6%
Nursery crops	72	7.5%	1.1	(9.5%)
Other vegetables and herbs	173	(10.8%)	0.4	(19.3%)

Approximately \$95 million in Missouri value of sales in floriculture, bedding and nursery crops (open and protected) in 2022

Source: USDA NASS
nass.usda.gov/AgCensus



Missouri Vegetable Industry (open field)

Fresh market

Category	Farms	Five-year change (%)	Acres	Five-year change (%)
Watermelons	273	(17.3%)	2,662	(7.7%)
Pumpkins	359	8.1%	1,348	N/A
Sweet corn	311	(20.7%)	1,202	7.6%
Potatoes	183	(46.8%)	476	(12.7%)
All veg.	1,332	(3.0%)	7,988	(5.1%)

Missouri crops with greater than 100 acres in harvested production: *Cantaloupes, cucumbers, peppers, potatoes, pumpkins, squash, sweet corn, sweet potatoes, tomatoes, watermelons*

Processing market

Category	Farms	Five-year change (%)	Acres	Five-year change (%)
Potatoes	20	(46.9%)	7,461	(6.8%)
Other	147	(18.3%)	1,328	(35.6%)
All veg.	167	(23.0%)	8,789	(12.7%)

Mostly large-scale potato production
(84% of processing acres, average of 373 acres/farm)



Other Missouri Specialty Crops

Top other Missouri specialty crops, 2022

Category	Farms	Five-year change (%)	Units
Christmas trees	181	57.4%	1,944 acres
Honey bees	2,493	10.5%	19,833 colonies
Mushrooms	35	2.9%	97,453 sq. ft.
Sod	26	N/A	5,269 acres
Maple syrup	45	21.6%	3,091 taps set

Source: USDA NASS
nass.usda.gov/AgCensus

Financial snapshot from the Census of Agriculture, 2022

Missouri Specialty Crop Averages Per Farm	Vegetable & Melon Farms	Fruit & Tree Nut Farms	Greenhouse, nursery & floriculture
Ag products sold and government payments	\$120,493	\$33,462	\$178,373
% of farms with net gain in farm income	63%	51%	59%
Avg. value of land & buildings	\$551,874	\$449,655	\$443,585

Financial performance measures

Missouri Specialty Crop Averages Per Farm	Vegetable & Melon Farms	Fruit & Tree Nut Farms	Greenhouse, nursery & floriculture
Net cash farm income*	\$45,212	\$6,061	\$57,901
Asset-turnover rate^	21.8%	7.4%	40.2%
Net farm income ratio^	37.5%	18.1%	32.5%
Farming as a primary occupation*	41%	27%	47%

* Estimates from the 2022 Census of Agriculture for Missouri farms.

^ Authors calculations using Census of Agriculture averages

Risk Management Options for Specialty Crop Producers

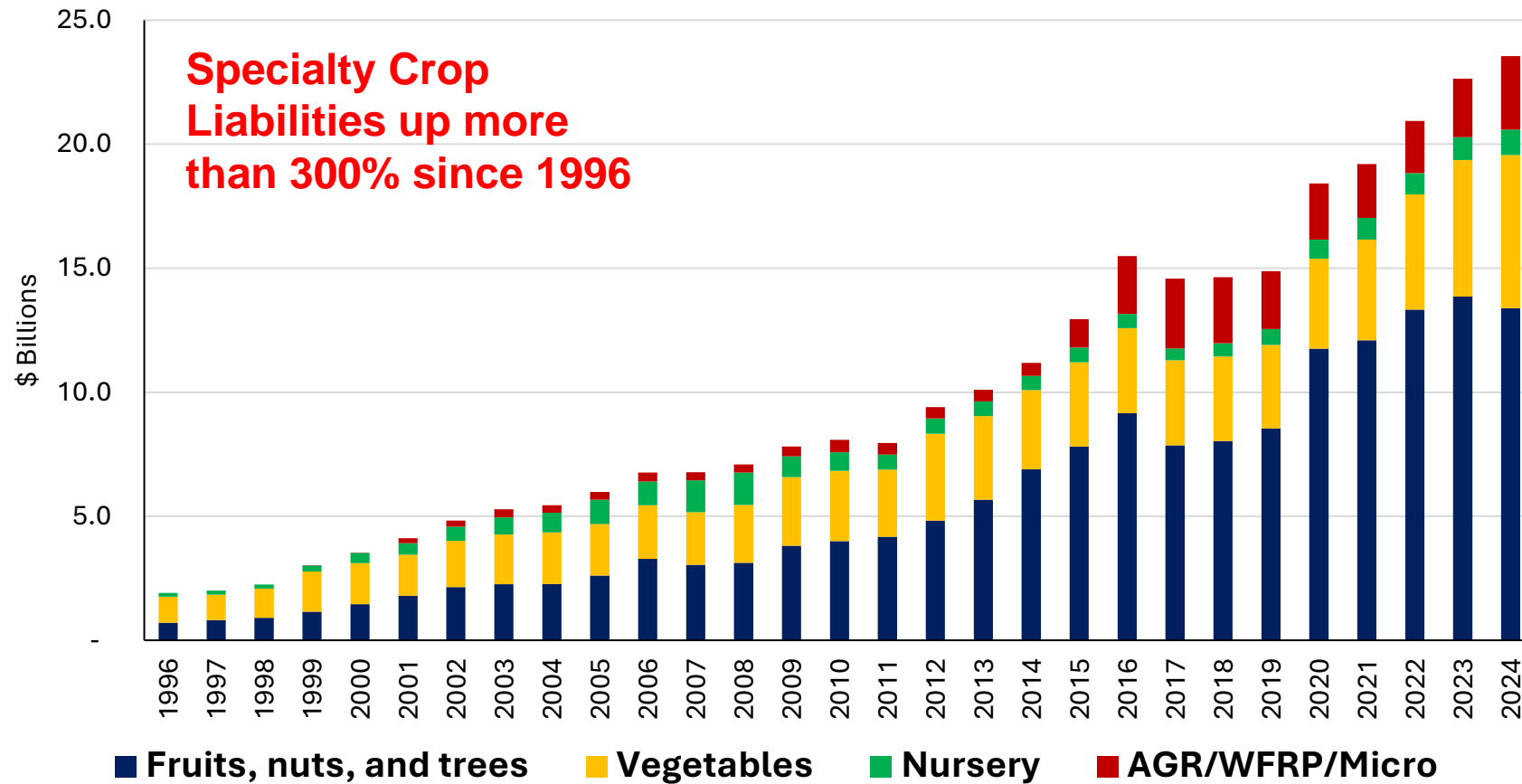
Crop Insurance Options – Risk Management Agency

- Multi-peril crop insurance (individual)
 - Yield protection
 - Revenue protection
- Whole Farm Revenue Protection (WFRP): Producers with greater than \$20 million in expected revenue
 - Micro farm revenue protection: Producers with less than \$350,000 in expected revenue
- Written agreements

Noninsured Crop Disaster Assistance Program (NAP) – Farm Service Agency

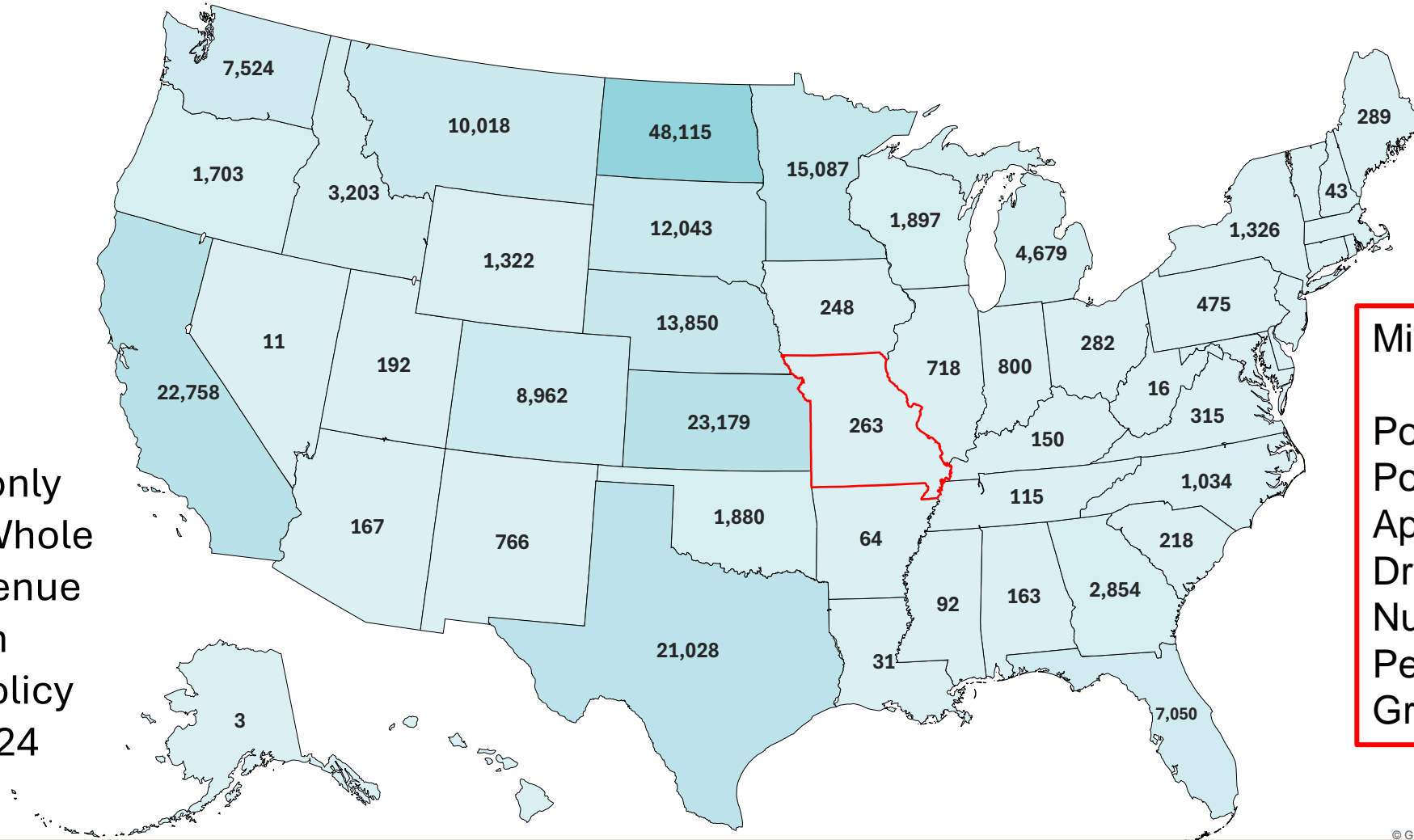
extension.missouri.edu/publications/g463

Specialty Crop Insurance Liabilities, 1996 - 2024



Source: Juo-Han Tsay calculation, USDA Risk Management Agency

Specialty Crop Individual Policies Sold by State, 2024



Missouri only had one Whole Farm Revenue Protection (WFRP) policy sold in 2024

Missouri in 2024:

- Popcorn 232 policies
- Potatoes 12 policies
- Apples 5 policies
- Dry beans 5 policies
- Nursery 4 policies
- Peaches 2 policies
- Grapes, Hemp 1 policy

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Source: Juo-Han Tsay calculation, USDA Risk Management Agency

Lending Considerations for Specialty Crop Farmers

Production

Pros	Cons
Diversification achieved in crop mix	Yield fluctuations due to disease, weather or production issues
Lower capital needs than other crop or livestock farms	Crop insurance not as effective at managing production risk
Higher returns on assets than other agriculture	Multi-year lag between planting and harvest for perennials and trees
Rapid development on low-cost tools/systems to increase efficiencies	Can be labor intensive

Marketing

Pros	Cons
Season extension investments to harvest crops off-cycle can command higher prices	Prices vary seasonally by market channel (retail, wholesale, etc.)
Producers can capture retail prices	Prices vary widely by market channel
More opportunities to create value-added products generating income across more months	Crops are often perishable, which requires storage investments or timed delivery

Specialty Crop Enterprise Budget Comparison

Production Details	Microgreens – 4-shelf rack with 16 total trays	High tunnel with tomatoes	Elderberries	Hydroponic, deep water culture Leafy greens
Production Space	Indoors – 4' x 5'	Covered 2000 sq ft	Outdoor 1 acre	Indoors 2,816 sq ft greenhouse
Time to harvest	8-14 days, 26-46 crop cycles a year	226 plants, 6 months	Year 2 starts, year 5 Full production	6 weeks
Initial capital investment	\$5,000	\$20,500	\$11,000	\$115,000
Annual projected Income	\$23,638 (\$4/ounce)	\$6,836 (\$2.75/pound)	\$18,000 (year 5) (\$3/ pound destemmed)	\$110,922 (\$1.63/head; \$39.39/sq ft)
Income Over Annual Costs	\$6,276	\$1,530	\$6,700	\$22,955

Free Websites to Support Decision-Making



Assess market demand and management skills, and find tools for self-paced learning

<http://intelforag.org>



Track wholesale and retail prices for a variety of specialty crop products using nationwide data

<http://muext.us/specialtycropinsights>



Explore soil classes and productivity ratings for any user defined land parcel

<http://agsite.missouri.edu>

Find these and other resources at: <http://muext.us/UrbanAg>

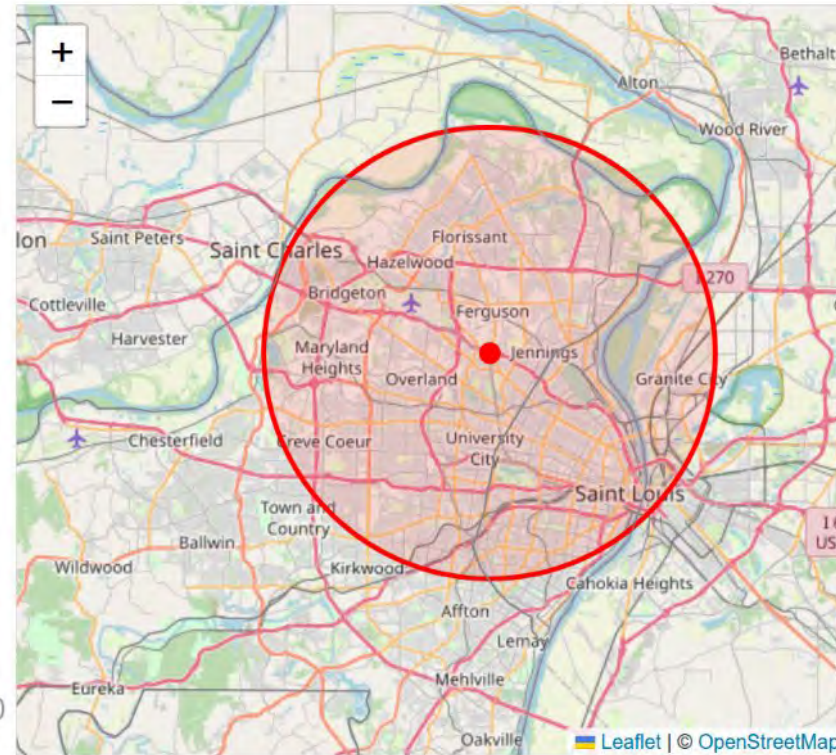
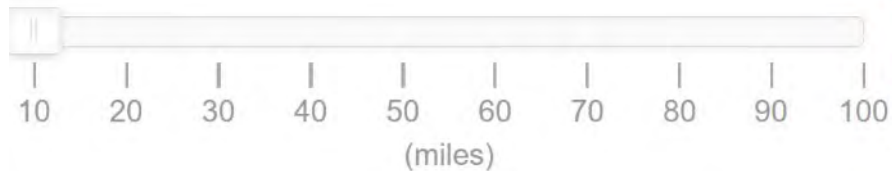
Intel for Ag

Market Intelligence Report

To customize this report, set the distance from your selected farm location that you'd like to explore. The report will then update to share data for the market area you choose.

Use the slider to pick a radius measured in miles and define the market area you want to evaluate.

Market area radius selection: **10 miles**



10-mile radius customer demographics:

- 819,881 people
- Median household incomes range from \$28,774 in nearest community to \$78,067 in the county \$78,067
- 5 farmers markets in less than 5 miles

Specialty Crops Insight Board

Commodity Category	Current Price	2_Year_Avg_Price	3_Year_Avg_Price	5_Year_Avg_Price	10_Year_Avg_Price	15_Year_Avg_Price	Most Common Package Type
BOK CHOY	33.95	33.53	32.02	30.45	28.04	24.75	30 lb containers
Herbs							
BASIL	7.33	5.78	5.53	5.51	5.53	5.37	1 lb film bags
THYME	6.72	6.44	6.36	6.39	6.44	6.43	1 lb film bags
MINT	20.54	24.64	18.31	16.07	14.62	14.10	cartons bunched
CILANTRO	22.25	23.50	23.50	23.50	18.70	17.74	cartons bunched
DILL	28.07	28.62	30.23	30.39	27.38	26.32	cartons bunched
PARSLEY	27.58	40.23	41.10	41.02	41.02	40.65	cartons bunched
Microgreens							
BEAN SPROUTS	7.01						5 lb film bags
CABBAGE SPROUTS	12.26						cartons loose
ALFALFA SPROUTS	16.72	22.60	21.70	17.29	14.06	12.56	cartons 12 4-oz packages
Tomatoes							
TOMATOES, CHERRY	32.47	20.97	20.41	16.69	14.92	14.27	flats 12 1-pt baskets
TOMATOES, GRAPE TYPE	36.99	17.53	17.58	16.18	14.49	15.23	flats 12 1-pt containers with l
TOMATOES, PLUM TYPE	38.97	21.22	20.40	19.71	18.27	17.08	25 lb cartons loose
TOMATOES	28.84	22.16	20.66	20.64	19.04	17.68	25 lb cartons loose

Market

ATLANTA	BOSTON	COLUMBIA	DETROIT	MIAMI	PHILADELPHIA	SAN FRANCISCO	ST. LOUIS
BALTIMORE	CHICAGO	DALLAS	LOS ANGELES	NEW YORK	PITTSBURGH	SEATTLE	

Product Type

Non-Organic
Organic

Engage with the board at: <http://muext.us/specialtycropinsights>

AgSite Assessment Tool

Free tool to inform land purchases, rentals, and use



Soils and Productivity

SOILS

 Map  Info

Map Unit Symbol	Map Unit Name	Acres	Percent of Area	Hydrologic Group	Productivity Index (NCCPI)	Productivity Index Crop
60251	Winfield-Urban land complex, 5 to 9 percent slopes	4.1	54.27	C	78.0	Corn
66024	Wilbur silt loam, 0 to 2 percent slopes, frequently flooded	3.1	41.78	B/D	84.7	Corn
60252	Winfield-Urban land complex, 9 to 20 percent slopes	0.3	3.95	C	80.4	Corn
--	Report Area	7.5	100.00	--	80.9	Average

Source: USDA NRCS [SSURGO](#) Database, accessed October 2022 via the [Geospatial Data Gateway](#)

Understand soils, slope, hydrology and climate for any geography

Data includes soils, streams, wetlands, ponds, watersheds, floodplains, Karst geology, legal description, and threatened and endangered species

Create an AgSite assessment at: <http://agsite.missouri.edu/>

MORE QUESTIONS?

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muext.us/AgBusiness



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