



Cooperative Extension

Urban & Small Agriculture Production

Ayman Mostafa

Area Agent and Regional Specialist,
Urban Agriculture and IPM

Colleen Hanley

Assistant in Extension, Urban Agriculture Production

Sara Hipperson

Program Coordinator, Urban Agriculture Production

Building Opportunities: Arizona Urban Agriculture Production Program for Small-Scale and Beginning Farmers

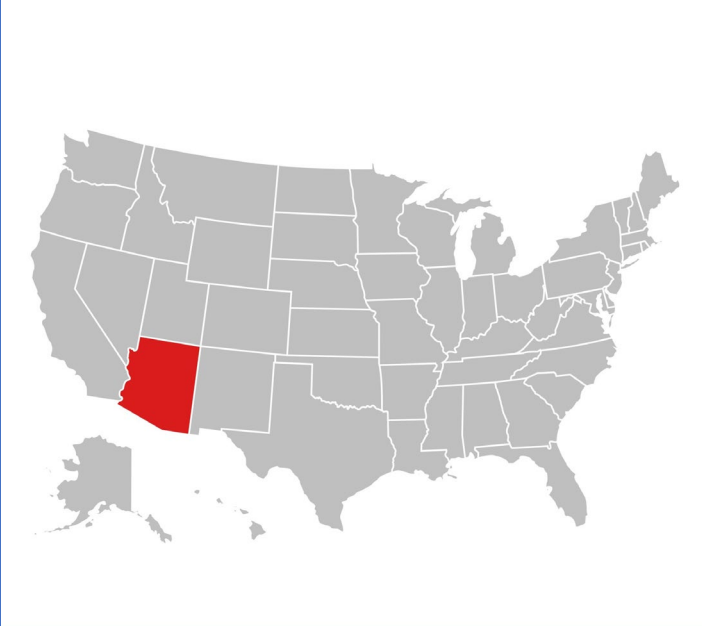


About half of humanity live in cities today. By 2050, two-thirds of the global population will be urban dwellers.

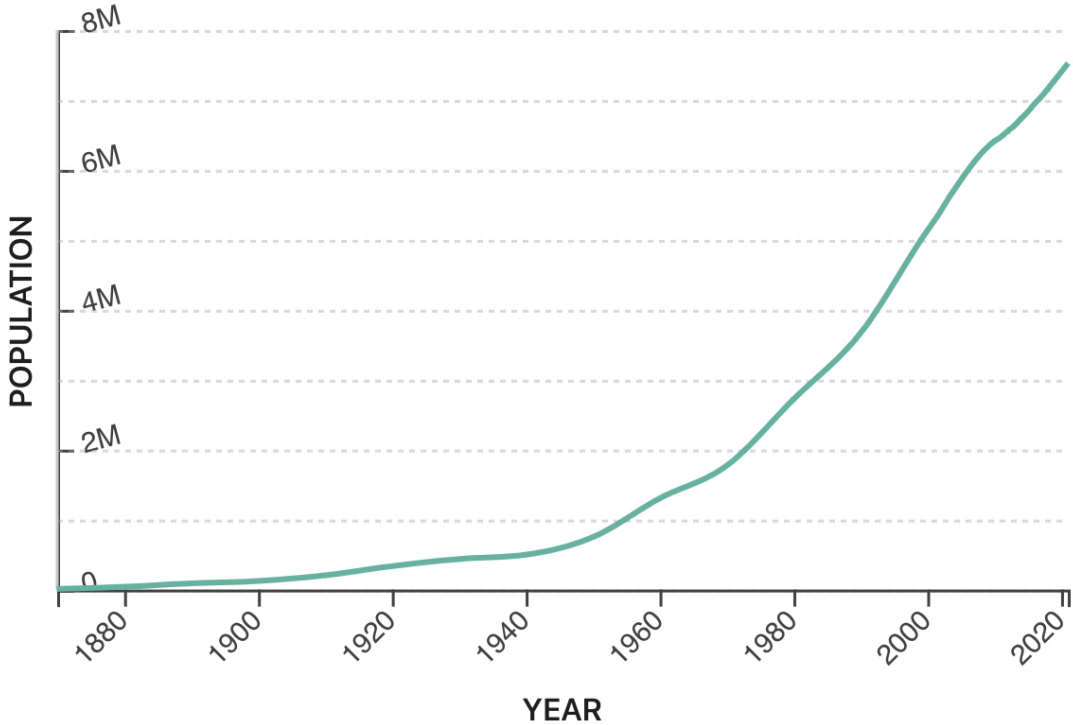


Arizona Population 2021

7,520,103

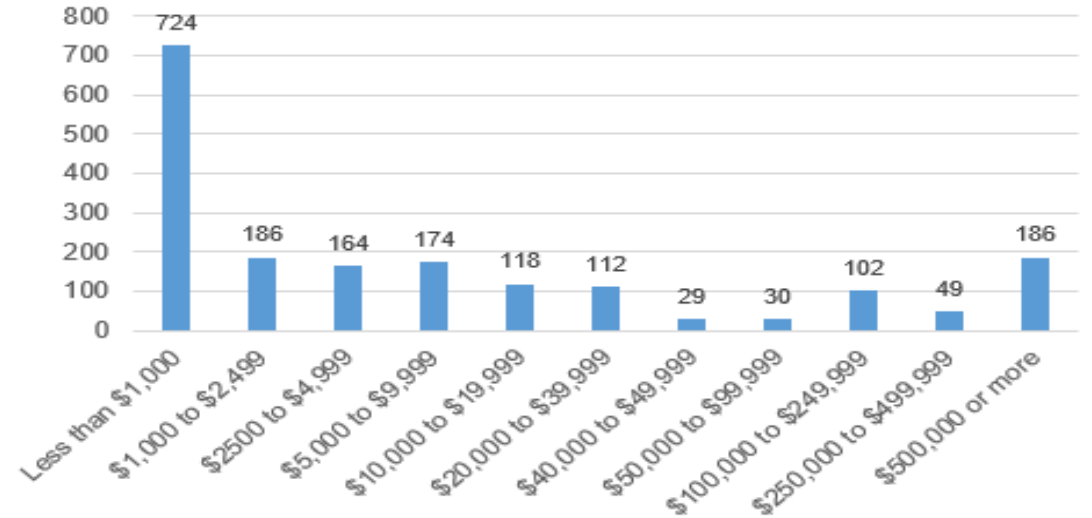


ARIZONA



Statistics

- 50% of Arizona farms have less than ten acres of land
- 88% of the farms earning less than \$25,000 in annual sales.
- Average farm sizes in Arizona decreased by 57%
- The number of farms increased by 127%, with 24% beginner farmers in the state.
- Small urban agriculture contribution to economic development, employment, sustainable local fresh food, tourism industry is great and requiring more support.



What is Urban Agriculture?

Urban agriculture, is "[c]ity and suburban agriculture [that] takes the form of backyard, roof-top and balcony gardening, community gardening in vacant lots and parks, roadside urban fringe agriculture and livestock grazing in open space." [EPA [epa.gov] website (9/23/2022)]



"Urban agriculture includes the cultivation, processing and distribution of agricultural products in urban and suburban areas. Community gardens, rooftop farms, hydroponic, aeroponic, and aquaponic facilities, and vertical production are all examples of urban agriculture. Tribal communities and small towns may also be included." [USDA [usda.gov] website (9/23/2022)]





While urban agriculture is not defined by U.S. law, the 2018 Farm Bill (Agriculture Improvement Act of 2018, P.L. 115-334) [congress.gov, pdf, 529 pages] refers to the urban farming demographic as urban, indoor, and other emerging agricultural production.























The University of Arizona Cooperative Extension's Urban Agriculture Production, Small-Scale, and Beginning Farmer Program

- Newsletter & Instagram
- People's Demonstration Farm & Research site at SoO / Tucson
- Technical Assistance via phone, email, or in-person



The Urban Agriculture & Beginner Farmer Program
FOR URBAN, SMALL-SCALE, & BEGINNER FARMERS



January 12
3:00-4:00pm in Phoenix

Join our Service Incubator series! A new **in-person** event series in Maricopa County. Hosted by the UArizona Cooperative Extension's Urban Agriculture Production, Small-Scale, and Beginning Farmer Program, the Service Incubator is a bi-monthly meeting with representatives from USDA-NRCS, FSA, and urban, small-scale and beginner farmers. Service Incubator meetings open up opportunities to discuss USDA programs and services, the unique needs of each community, and offer opportunity for direct technical assistance.

This event is free to attend, [Register here!](#)



Cooperative Extension
Urban & Small Agriculture Production

The Urban Ag Hour

- Monthly on Zoom
- Brings in speakers from USDA, AZDA, non-profits & agricultural technical experts
- Free to attend, 1-hour!

Irrigation Association Friction Loss Chart 2008
Schedule 40 PVC IPS Plastic Pipe
 ASTM D1785 C=150
 psi loss per 100 feet of pipe

Nominal size	1/2"		3/4"		1"		1-1/4"		1-1/2"		2"		2-1/2"		3"	
	Avg. ID	Pipe OD	Avg. ID	Pipe OD	Avg. ID	Pipe OD	Avg. ID	Pipe OD	Avg. ID	Pipe OD	Avg. ID	Pipe OD	Avg. ID	Pipe OD	Avg. ID	Pipe OD
	0.602	0.840	0.804	1.050	1.029	1.315	1.360	1.660	1.590	2.047	2.445	2.445	3.042	3.042	3.500	3.500
	0.119	0.109	0.123	0.113	0.143	0.133	0.150	0.140	0.155	0.145	0.164	0.154	0.215	0.203	0.229	0.216
	0.109	0.113	0.113	0.113	0.133	0.133	0.140	0.140	0.145	0.145	0.154	0.154	0.203	0.203	0.216	0.216
Flow (gpm)	Velocity (ft/s)	psi loss	Velocity (ft/s)	psi loss	Velocity (ft/s)	psi loss	Velocity (ft/s)	psi loss	Velocity (ft/s)	psi loss	Velocity (ft/s)	psi loss	Velocity (ft/s)	psi loss	Velocity (ft/s)	psi loss
1	1.13	0.50	0.63	0.12	0.39	0.04	0.22	0.01	0.16	0.00						
2	2.25	1.82	1.26	0.44	0.77	0.13	0.44	0.03	0.32	0.02	0.19	0.00				
3	3.38	3.85	1.89	0.94	1.16	0.28	0.66	0.07	0.48	0.03	0.29	0.01				
4	4.50	6.55	2.52	1.60	1.54	0.48	0.88	0.12	0.65	0.06	0.39	0.02	0.27	0.01		
5	5.63	9.91	3.16	2.42	1.93	0.73	1.10	0.19	0.81	0.09	0.49	0.03	0.34	0.01		
6	6.75	13.89	3.79	3.40	2.31	1.02	1.32	0.26	0.97	0.12	0.58	0.04	0.41	0.02	0.26	0.01
7	7.88	18.48	4.42	4.52	2.70	1.36	1.54	0.35	1.13	0.16	0.68	0.05	0.48	0.02	0.31	0.01
8	9.01	23.66	5.05	5.79	3.08	1.74	1.76	0.45	1.29	0.21	0.78	0.06	0.55	0.03	0.35	0.01
9	10.13	29.43	5.68	7.20	3.47	2.17	1.99	0.56	1.45	0.26	0.88	0.08	0.61	0.03	0.40	0.01
10	11.26	35.77	6.31	8.75	3.85	2.63	2.21	0.68	1.61	0.32	0.97	0.09	0.68	0.04	0.44	0.01
12	13.51	50.14	7.57	12.27	4.62	3.69	2.65	0.95	1.94	0.44	1.17	0.13	0.82	0.05	0.53	0.02
14	15.76	66.71	8.84	16.32	5.39	4.91	3.09	1.26	2.26	0.59	1.36	0.17	0.96	0.07	0.62	0.03
16	18.01	85.42	10.10	20.90	6.17	6.29	3.53	1.62	2.58	0.76	1.56	0.22	1.09	0.09	0.71	0.03
18	20.26	106.24	11.36	25.99	6.94	7.82	3.97	2.01	2.90	0.94	1.75	0.28	1.23	0.12	0.79	0.04
20			12.62	31.59	7.71	9.51	4.41	2.45	3.23	1.14	1.95	0.33	1.36	0.14	0.88	0.05
22			13.89	37.69	8.48	11.35	4.85	2.92	3.55	1.37	2.14	0.40	1.50	0.17	0.97	0.06
24			15.15	44.28	9.25	13.33	5.29	3.43	3.87	1.60	2.34	0.47	1.64	0.20	1.06	0.07
26			16.41	51.36	10.02	15.46	5.74	3.98	4.20	1.86	2.53	0.54	1.77	0.23	1.15	0.08
28			17.67	58.91	10.79	17.73	6.18	4.56	4.52	2.13	2.73	0.62	1.91	0.26	1.23	0.09
30			18.94	66.94	11.56	20.15	6.62	5.19	4.84	2.42	2.92	0.71	2.05	0.30	1.32	0.10
32					12.33	22.71	7.06	5.85	5.16	2.73	3.12	0.80	2.18	0.34	1.41	0.12
34					13.10	25.41	7.50	6.54	5.49	3.06	3.31	0.89	2.32	0.38	1.50	0.13
36					13.87	28.24	7.94	7.27	5.81	3.40	3.51	0.99	2.46	0.42	1.59	0.14
38					14.64	31.22	8.38	8.04	6.13	3.76	3.70	1.10	2.59	0.46	1.68	0.16
40					15.41	34.33	8.82	8.84	6.46	4.13	3.89	1.21	2.73	0.51	1.76	0.18
42					16.18	37.58	9.26	9.67	6.78	4.52	4.09	1.32	2.87	0.56	1.85	0.19
44					16.95	40.96	9.71	10.54	7.10	4.93	4.28	1.44	3.00	0.61	1.94	0.21
46					17.73	44.47	10.15	11.45	7.42	5.35	4.48	1.57	3.14	0.66	2.03	0.23
48					18.50	48.12	10.59	12.39	7.75	5.79	4.67	1.69	3.28	0.71	2.12	0.25
50					19.27	51.90	11.03	13.36	8.07	6.25	4.87	1.83	3.41	0.77	2.20	0.27
55							12.13	15.94	8.88	7.45	5.36	2.18	3.75	0.92	2.42	0.32
60							13.24	18.72	9.68	8.75	5.84	2.56	4.09	1.08	2.65	0.37
65							14.34	21.72	10.49	10.15	6.33	2.92	4.44	1.35	2.87	0.43





Urban Ag Field Days

- Quarterly in Phoenix, Prescott, Tucson and Flagstaff areas
- \$25 dollars to attend, lunch included
- 10am-3pm full day events with farm tours, talks and networking lunches



Organic Agriculture Workshops

- On Organic Transition and Certification Process
- 4 times a year
- Free to attend - In-person & virtual options



Course Offerings and Certifications

- Beekeeping Certificate Course
- Urban and Small Farm Course – Coming soon!
- Urban and Small-Scale Ag Conservation Certification – Coming Soon!

Acknowledgements

Special thanks to our entire Urban Agriculture Production, Small-Scale, and Beginning Farmer Program Team
Colleen Hanley, Jared Williams, Sara Hipperson, Sharrona Moore
Not pictured are: Ayman Mostafa, Tiffany Drake, Avik Mukherjee, and Kyle Harrington



Stay in Touch & Follow Us!

Subscribe to our Newsletter:



Follow us on Instagram here:



Follow us Eventbrite here:



QUESTIONS?



THE UNIVERSITY OF ARIZONA

Cooperative Extension

Urban & Small Agriculture Production

Questions or concerns, contact
Tiffany Drake at
draket@arizona.edu