

Arizona Agriculture
Reaches the World

Citrus, Fruit and Vegetable Division

Annual Report July 1, 2019-June 30, 2020



AZDA
ARIZONA
DEPARTMENT
OF AGRICULTURE

ARIZONA DEPARTMENT OF AGRICULTURE
1688 W. ADAMS STREET
PHOENIX, AZ 85007

Ed Foster, Associate Director
Douglas A. Ducey, Governor

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ARIZONA DEPARTMENT OF AGRICULTURE

CITRUS, FRUIT & VEGETABLE DIVISION

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<https://agriculture.az.gov/about-us/divisions/citrus-fruit-vegetable-standardization>

The Citrus, Fruit and Vegetable Division as set forth in A.R.S. § 3-441 and A.R.S. § 3-481 provides produce licensing, collection of statistical data and fresh produce administrative assistance. Citrus, Fruit and Vegetable Division formerly monitored and enforced quality standards. Under the recommendation of the Citrus, Fruit and Vegetable Division Advisory Council, the Citrus, Fruit and Vegetable Division program has moved toward a food safety program instead of a produce quality program.

Statistical data is collected from Arizona Shippers, who are the first handlers of produce. Citrus, Fruit and Vegetable Division assists the Arizona Citrus Research Council (ACRC) and the Arizona Iceberg Lettuce Research Council (AILRC) in the collection of assessments and statistical data. ACRC and AILRC support the development of citrus and iceberg lettuce research programs and projects within the Arizona produce industry.

Citrus, Fruit and Vegetable Division assisted in the implementation and in the current administration of the State of Arizona's first marketing agreement. Arizona Leafy Greens Marketing Agreement (Arizona LGMA) provides food safety audits to the Arizona produce industry and is managed by the Arizona Leafy Greens Food Safety Committee. The Arizona Leafy Greens Food Safety Committee is made up of five signatory members, elected by all of the Arizona LGMA signatories. Arizona is the second largest leafy green producer in the United States. Arizona LGMA members represent 97% of leafy green products grown in Arizona.

Under a cooperative agreement with the United States Department of Agriculture (USDA), Citrus, Fruit and Vegetable Division manages the Federal-State Inspection Service which includes shipping point and terminal market inspections with offices in Phoenix, Nogales, and Yuma.

The Produce Safety Rule is administered under the guidance of Citrus, Fruit and Vegetable Division through a grant provided by the U.S. Food and Drug Administration (FDA). The Produce Safety Rule program provides the Arizona produce industry training, outreach, and inspection for compliance of the Produce Safety Rule component of the Food Safety Modernization Act.

This program is entirely industry funded through license fees and carton assessments and uses no general fund monies. We work closely with a governor appointed industry advisory council, which meets quarterly and advises the program supervisor on all issues pertaining to Citrus, Fruit and Vegetable Division.



Note: Acreage information is available at:

Arizona Agricultural Statistics

230 N. 1st Avenue, suite 303

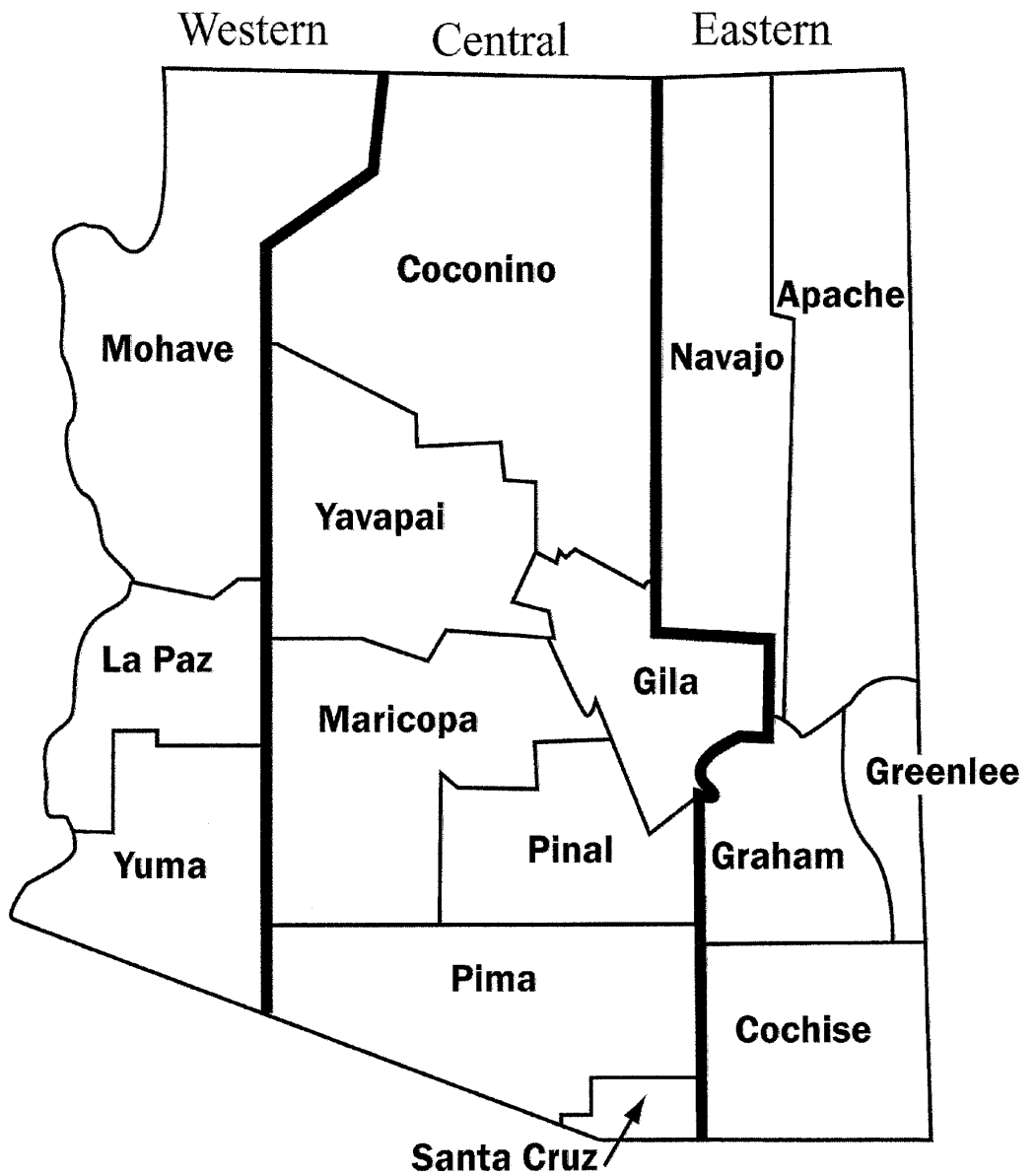
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Arizona Fresh Fruit & Vegetable Production District Map



**TOP TEN ARIZONA PRODUCE COMMODITIES
JULY 1, 2019 - JUNE 30, 2020**

Commodity	Package	Central	Western	Eastern	Total Arizona
Lettuce, Iceberg	Carton	234,852	20,715,887	0	20,950,739
Lettuce, Romaine	Carton	4,116	18,742,649	0	18,746,765
Cantaloupe	Carton	4,756,597	2,700,588	0	7,457,185
Lettuce, Leaf	Carton	10,072	6,680,945	0	6,691,018
Spinach	Carton	148,317	6,341,185	0	6,489,502
Broccoli	Carton	895,036	5,522,996	0	6,418,031
Spring Mix	Carton	132,917	4,836,886	0	4,969,803
Cauliflower	Carton	78,691	4,434,561	0	4,513,252
Cabbage	Carton	492,600	2,982,008	0	3,474,608
Watermelon	Carton	1,179,169	2,254,453	0	3,433,622

**TOTAL ARIZONA PRODUCTION
JULY 1, 2019 - JUNE 30, 2020**

Commodity	Package	Central	Western	Eastern	Total Arizona
<u>VEGETABLES</u>					
Anise	Carton	9,947	79,148	0	89,095
Arugula	Carton	0	543,320	0	543,320
Bean Sprouts	Carton	0	1,911	0	1,911
Beets	Carton	40,880	51,556	0	92,436
Bok Choy	Carton	20,380	68,677	0	89,057
Broccoli	Carton	895,036	5,522,996	0	6,418,031
Brussel Sprouts	Carton	0	21,222	0	21,222
Cabbage	Carton	492,600	2,982,008	0	3,474,608
Cauliflower	Carton	78,691	4,434,561	0	4,513,252
Celery	Carton	0	2,110,514	0	2,110,514
Cilantro	Carton	263,705	743,147	0	1,006,852
Corn	Carton	275,677	0	0	275,677
Dandelion	Carton	16,397	6,976	0	23,373
Dill	Carton	4,975	3,146	0	8,121
Endive	Carton	0	19,844	0	19,844
Escarole	Carton	0	37,864	0	37,864
Frisee	Carton	0	7,142	0	7,142
Greens, Mixed	Carton	90,171	30,030	0	120,201
Herbs	Carton	0	14,917	0	14,917
Kale	Carton	139,663	555,153	0	694,816
Kohlrabi	Carton	8,657	0	0	8,657
Leeks	Carton	15,805	16,343	0	32,148
Lettuce, Boston	Carton	0	415,223	0	415,223
Lettuce, Iceberg	Carton	234,852	20,715,887	0	20,950,739
Lettuce, Leaf	Carton	10,072	6,680,945	0	6,691,018
Lettuce, Romaine	Carton	4,116	18,742,649	0	18,746,765

TOTAL ARIZONA PRODUCTION (continued)
JULY 1, 2019 - JUNE 30, 2020

Commodity	Package	Central	Western	Eastern	Total Arizona
<u>VEGETABLES continued</u>					
Napa	Carton	23,473	96,747	0	120,220
Onions, Dry	Carton	281,187	204,103	0	485,290
Parsley	Carton	99,906	252,808	0	352,714
Potatoes, Table	50 Lb Carton	354,637	0	0	354,637
Radicchio	Carton	0	65,842	0	65,842
Spinach	Carton	148,317	6,341,185	0	6,489,502
Spring Mix	Carton	132,917	4,836,886	0	4,969,803
Swiss Chard	Carton	46,776	80,057	0	126,833
Tomatoes	Carton	420,288	0	399,133	819,421
Turnips	Carton	18,922	0	0	18,922
Watercress	Carton	0	44,618	0	44,618
<u>FRUIT</u>					
Apples	Carton	0	0	21,317	21,317
Apples	Mfg Ton	0	0	3,768	3,768
Figs	Carton	30,917	0	0	30,917
Pears	Mfg Ton	0	0	90	90
<u>MELONS</u>					
Cantaloupe	Carton	4,756,597	2,700,588	0	7,457,185
Honeydew	Carton	1,164,345	447,686	0	1,612,031
Specialty/Mixed Melon	Carton	65,816	252,646	0	318,462
Watermelon	Carton	1,179,169	2,254,453	0	3,433,622
<u>CITRUS</u>					
Lemons	Carton	0	2,498,897	0	2,498,897
Oranges, Navel	Carton	0	26,939	0	26,939
Tangerines, Fairchild	Carton	0	20,830	0	20,830
Tangerines, Mandarin	Carton	0	10,911	0	10,911
Tangerines, Minneola	Carton	0	97,286	0	97,286
Tangerines, Orlando	Carton	0	442	0	442
<u>CITRUS BY-PRODUCTS</u>					
Lemons	Ton	0	18,928	0	18,928
Oranges, Navel	Ton	0	203	0	203
Tangerines, Fairchild	Ton	0	134	0	134
Tangerines, Minneola	Ton	0	2,530	0	2,530
Tangerines, Orlando	Ton	0	85	0	85

FIVE YEAR PRODUCTION COMPARISONS

Comparison of Fresh Cartons

Commodity	Carton Size	2015-16	Revised 2016-17	2017-18	2018-19	2019-2020
Anise	37 lbs.	90,012	98,459	88,480	94,755	89,095
Apples	40 lbs.	37,205	14,700	15,787	8,372	21,317
Artichokes	23 lbs.	0	0	0	0	0
Arugula	35 lbs.	703,398	642,207	750,841	534,096	543,320
Asparagus	30 lbs.	0	0	48	0	0
Bean Sprouts	10 lbs.	722	0	1,104	280	1,911
Beans, Green	25 lbs.	151	3	0	0	0
Beets	35 lbs.	48,719	79,217	99,793	91,716	92,436
Bok Choy	38 lbs.	77,593	84,085	67,230	72,601	89,057
Broccoli	23 lbs.	4,712,754	5,774,409	5,553,281	6,227,550	6,418,031
Brussel Sprouts	25 lbs.	555	17,093	40,499	17,633	21,222
Cabbage	50 lbs.	3,169,207	3,312,379	3,297,703	3,978,812	3,474,608
Canary Melons	30 lbs.	0	260	0	0	0
Cantaloupes	40 lbs.	9,194,931	8,676,637	9,244,179	7,688,295	7,457,185
Cauliflower	25 lbs.	3,341,121	4,032,473	4,631,240	4,453,735	4,513,252
Celery	50 lbs.	1,989,449	2,307,515	4,017,663	1,841,509	2,110,514
Cilantro	20 lbs.	463,292	622,501	676,646	776,396	1,006,852
Corn, Sweet	50 lbs.	310,604	415,261	424,073	432,166	275,677
Cucumbers	30 lbs.	87,947	403	0	0	0
Daikon	40 lbs.	0	40	196	156	0
Dandelion/Dill	15 lbs.	30,390	33,975	36,289	35,064	31,494
Eggplant	33 lbs.	6,249	0	0	0	0
Endive	30 lbs.	27,930	19,212	15,217	12,519	19,844
Escarole	30 lbs.	4,893	8,230	13,296	31,711	37,864
Figs	20 lbs.	37,623	7,491	27,508	31,219	30,917
Frisee	35 lbs.	2,137	4,239	866	2,959	7,142
Garlic	30 lbs.	41	0	0	0	0
Grapefruit	34 lbs.	12,499	12,566	11,488	20,360	0
Grapes	20 lbs.	7,183	8,285	0	9,464	0
Greens, Mixed	25 lbs.	41,075	108,062	101,885	119,420	120,201
Herbs	5 lbs.	161,881	69,350	36,384	22,735	14,917
Honeydew	30 lbs.	2,038,637	1,960,207	2,397,874	1,753,635	1,612,031
Kale/Flowering Kale	25 lbs.	729,520	806,376	757,520	793,565	694,816
Kohlrabi	20 lbs.	6,344	9,470	12,328	10,423	8,657
Leeks	30 lbs.	25,108	20,024	29,150	28,443	32,148
Lemons	40 lbs.	2,418,119	2,717,532	1,692,509	1,978,008	2,498,897
Lettuce, Boston	35 lbs.	300,783	438,760	533,763	450,652	415,223
Lettuce, Iceberg	50 lbs.	25,374,021	24,220,179	23,923,370	24,405,556	20,950,739
Lettuce, Leaf	35 lbs.	6,485,046	5,952,196	6,548,719	6,302,892	6,691,018
Lettuce, Romaine	40 lbs.	21,531,432	22,973,908	21,912,452	19,353,392	18,746,765
Mache	35 lbs.	0	0	0	0	0
Napa	40 lbs.	119,612	100,255	101,122	120,564	120,220
Okra	30 lbs.	0	0	0	0	0

Comparison of Fresh Cartons Continued

Commodity	Carton Size	2015-16	2016-17	2017-18	2018-19	2019-20
Onions, Dry	50 lbs.	833,091	762,584	684,018	818,749	485,290
Onions, Green	13 lbs.	187	27,422	0	373	0
Orange Flesh Melons	30 lbs.	0	0	0	0	0
Oranges	40 lbs.	54,783	29,930	45,781	45,566	26,939
Parsley	21 lbs.	279,396	279,968	290,001	335,136	352,714
Peaches	26 lbs.	579	0	0	0	0
Pears	26 lbs.	6,155	260	621	4,397	0
Peas, English	25 lbs.	67	0	80	0	0
Peppers, Bell	30 lbs.	8	6	0	0	0
Peppers, Chile	30 lbs.	0	0	0	0	0
Potatoes, Table 50#	50 lbs.	516,710	726,948	511,105	268,135	354,637
Pumpkins	60 lbs.	0	33,419	1,783	0	0
Radicchio	35 lbs.	15,941	50,656	46,452	73,919	65,842
Rapini	25 lbs.	0	0	0	0	0
Santa Claus Melons	30 lbs.	96	10,960	0	0	0
Specialty & Mixed Melons	30 lbs.	361,855	379,274	522,651	575,126	318,462
Spinach	25 lbs.	7,733,769	7,165,532	7,427,594	7,971,256	6,489,502
Spring Mix	35 lbs.	5,649,201	4,262,435	2,923,325	2,484,382	4,969,803
Squash, Summer	30 lbs.	30,346	0	0	0	0
Squash, Winter	42 lbs.	0	0	0	0	0
Strawberries	24 lbs.	85,027	0	0	0	0
Sweet Potatoes/Yams	40 lbs.	0	468	0	0	0
Swiss Chard	15 lbs.	135,988	151,327	155,005	147,510	126,833
Tangerines	40 lbs.	187,370	142,661	140,790	164,949	129,469
Tomatoes	30 lbs.	822,762	2,246,631	927,229	773,252	819,421
Turnips	50 lbs.	13,604	16,418	26,545	28,413	18,922
Watercress	8 lbs.	0	955	78,156	66,716	44,618
Watermelon	60 lbs.	4,056,847	2,993,654	4,747,176	4,131,909	3,433,622
Total Cartons		104,371,965	104,829,467	105,588,815	99,590,441	95,783,444

FIVE YEAR PRODUCTION MANUFACTURED TONS COMPARISONS

Comparison of Mfg. Tons

Commodity	2015-16	2016-17	2017-18	2018-19	2019-20
Apples	2,367	1,844	1,777	1,866	3,768
Grapefruit	0	14	11	0	0
Lemons	7,860	9,495	4,971	10,106	18,928
Onions, Dry	0	0	0	0	0
Oranges	0	110	93	0	203
Pepper, Bell	834	1	0	0	0
Pepper, Chile	3,436	3,835	0	0	0
Potatoes, Table	0	200	0	0	0
Tangerines	838	1,378	1,120	1,365	2,749
Total Mfg. Tons	15,335	16,875	7,971	13,337	25,648

CITRUS, FRUIT & VEGETABLE DIVISION

CFV LICENSING

License Type	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Citrus Dealer	59	29	45	38	41
Produce Dealers	228	229	225	222	224
Shippers	154	158	150	147	139
Total	441	416	420	407	404

ORGANIC CERTIFICATION COST SHARE REIMBURSEMENTS

Organic operations may receive one reimbursement per certificate or scope of certification per year. The NOP currently recognizes four scopes of certification: crops, wild crops, livestock, and processing/handling. This means that clients with more than one certification scope may be eligible for more than one reimbursement.

Eligible operations will be reimbursed up to 75% of their organic certification costs, not to exceed \$750, for each NOP scope of organic certification. Any operation that is located within the United States and received organic certification on or between October 1, 2018 and September 30, 2019 may apply for reimbursement.

Fiscal Year	Certification Dates	Number of Reimbursements	Amount Reimbursed
FY 2011	October 1, 2010-September 30, 2011	32	\$31,989.22
FY 2012	October 1, 2011-September 30, 2012	43	\$35,888.48
<i>FY 2013</i>	<i>The USDA did not renew the Arizona grant for Organic Certification Cost Share Reimbursement for October 1, 2012-September 30, 2013.</i>		
FY 2014	October 1, 2013- September 30, 2014	48	\$40,897.37
FY 2015	October 1, 2014- September 30, 2015	58	\$67,727.27
FY 2016	October 1, 2015- September 30, 2016	60	\$41,273.58
FY 2017	October 1, 2016- September 30, 2017	91	\$67,794.83
FY 2018	October 1, 2017- September 30, 2018	98	\$67,491.37
FY 2019	October 1, 2018- September 30, 2019	80	\$47,038.15
Total		510	\$400,100.27

FEDERAL STATE INSPECTION SERVICE

The Arizona Federal-State Inspection Service, Fresh Produce Grade Inspection operates under a cooperative agreement between the United States Department of Agriculture and the Arizona Department of Agriculture. Citrus, Fruit and Vegetable Division has managed the program since 1996. The service is self supported with mandatory and voluntary inspection and certifications of fruits, vegetables and nuts and is funded entirely through user fees.

Inspection	Fiscal Year	Nogales	Phoenix	Yuma	Total
Market Inspections	FY 2018	538	611	16	1,165
	FY 2019	18,166	702	312	19,180
	FY 2020	30,209	598	184	30,991
Shipping Point Inspection	FY 2018	17,843	27	306	18,176
	FY 2019	1,741	8	81	1,830
	FY 2020	29,630	340	174	30,144
GHP/GAP Audits Statewide	FY 2018	40			
	FY 2019	42			
	FY 2020	30			

FOOD SAFETY MODERNIZATION ACT- PRODUCE SAFETY RULE PROGRAM

In September of 2016, the Arizona Department of Agriculture and the Food and Drug Administration (FDA) entered into a five year cooperative agreement for the implementation of the Food Safety Modernization Act (FSMA) Produce Safety Rule (PSR). In August of 2018, the AZDA's Citrus, Fruit and Vegetable (CFV) Division gained primacy over the PSR.

The goal of the cooperative agreement was to develop and implement, a training and outreach program and a regulatory compliance and enforcement program for Arizona stakeholders covered under the PSR. The overarching goal of the program is to protect public health through the safe production of fresh fruits and vegetables. Ultimately, minimizing the risks of pathogen contamination is instrumental to preventing foodborne illnesses.

We believe it is important to align our program with the federal regulation to guarantee consistency nationwide. We will leverage the existing expertise, knowledge and resources in our state to provide education, training, and technical assistance to all produce farms. To better understand and assess the type of risks which occur during the growing, harvesting, packing and holding of fresh fruits and vegetables the AZDA had to evaluate produce production in Arizona.



AZDA and UA Produce Safety Program Team FY 2020

Farm Inventory

In order to reach our goals and provide this outreach, we first had to establish an inventory of farms which are covered under the PSR. This information is shared with the FDA on an aggregate level. The AZDA recognizes the importance of providing our partners with only the necessary data while protecting the privacy of our stakeholders.

Farm Inventory Registry	FY 2019	FY 2020
Large Farms (Over 500,000 average annual produce sales)	143	109
Small Farms (250,000-500,000 average annual produce sales)	29	21
Very Small Farms (25,000-250,000 average annual produce sales)	31	36
Total Covered Farms	203	166
Qualified Exempt (Under 500,000 average annual produce sales and shipping within 275 miles)	15	35
Exempt (Under 25,000 average annual produce sales)	60	126

Education, Training and Technical Assistance

Education before regulation is necessary, as the rule is the first ever mandated food safety standard, thus determining the amount of resources needed to achieve the objectives required to implement the rule is also necessary. The AZDA provides sub award funding to the University of Arizona's Environmental Science Department for assistance from their cooperative extension staff that is well versed in food safety to assist in stakeholder trainings.

We made an effort to make training convenient for our industry by offering the mandatory, eight hour Produce Safety Alliance Grower Training course on a regular basis in different locations across Arizona. Additionally, a significant emphasis has been placed on enhancing individual farm technical assistance through our On-Farm Readiness Reviews. With the onset of COVID19, we adapted our training and outreach efforts to remote and online. Additional outreach was made through new online resources such as the AZDA Produce Safety Rule webpage, new social media accounts, an email listserv and the development of promotional videos.

Education, Training, and Technical Assistance	FY 2017	FY 2018	FY 2019	FY 2020	Total
PSA Grower Training Courses - ENG	1	4	10	6	21
PSA Grower Training Courses - SPA	1	2	1	2	6
Number of Participants - PSA	78	165	241	142	626
On Farm Readiness Reviews	0	0	25	46	71
Farm Visits	0	20	21	42	83

Compliance and Enforcement

Compliance and enforcement will ensure that we are providing the industry with the proper education, training and technical assistance to comply with the federal regulation and continue to improve upon their food safety practices. In November 2019 the AZDA began regulatory inspections that reinforced education before regulation.

PSR Inspections	FY 2020
Initial Inspection	57
Reinspection	1
Total	58