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Farm Computer Usage and Ownership

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Farm Computer Usage and Ownership Highlights

General computer usage and internet access categories increased from 2017 to 2019 in the United States. Nationally, 75 percent of farms reported having access to the internet, with 73 percent of farms having access to a desktop or laptop computer. Farms that used a desktop or laptop computer to conduct farm business was up 1 percent from 2017. Over half of the farms in the United States used a smart phone or tablet to conduct farm business, compared to 44 percent in 2017.

In 2019, 26 percent of farms used satellite and 22 percent of farms used a Digital Subscriber Line (DSL) to access the internet. Since 2017, Satellite and DSL continue to be the most popular choices that United States farms use to access the internet.

Farm Computer Usage – States and United States: 2017 and 2019

State	Farms			
	With desktop or laptop computer access		That own or lease desktop or laptop computers	
	2017	2019	2017	2019
	(percent)			
Alabama	63	63	59	55
Arizona ¹	58	58	53	53
Arkansas	66	70	63	65
California	79	92	72	85
Colorado	87	87	81	79
Florida	71	82	64	65
Georgia	70	80	57	65
Idaho	90	90	84	87
Illinois	80	80	78	75
Indiana	80	78	78	75
Iowa	72	76	70	73
Kansas	73	79	70	74
Kentucky	63	68	60	64
Louisiana	66	70	61	65
Maryland ²	74	79	65	71
Michigan	77	77	70	67
Minnesota	77	78	75	75
Mississippi	65	65	59	53
Missouri	66	66	64	64
Montana	80	80	76	79
Nebraska	81	81	79	75
New Hampshire ³	83	89	78	84
New Jersey	89	89	80	80
New Mexico	47	47	38	35
New York	83	83	80	77
North Carolina	71	76	64	69
North Dakota	79	79	76	76
Ohio	60	62	55	58
Oklahoma	65	68	56	62
Oregon	83	90	80	79
Pennsylvania	58	66	56	62
South Carolina	47	58	45	45
South Dakota	76	79	74	78
Tennessee	63	66	62	61
Texas	72	74	69	71
Utah	80	86	73	80
Virginia	67	67	57	62
Washington	91	91	84	86
West Virginia	64	65	49	58
Wisconsin	77	77	73	73
Wyoming	88	93	77	85
United States ⁴	72	73	68	69

See footnote(s) at end of table.

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Farm Computer Usage – States and United States: 2017 and 2019 (continued)

State	Farms					
	Using desktop or laptop computers for farm business		Use smart phone/tablet for farm business		With Internet access	
	2017	2019	2017	2019	2017	2019
	(percent)					
Alabama	35	36	35	44	72	74
Arizona ¹	34	35	34	34	61	63
Arkansas	42	47	45	56	65	76
California	61	68	59	66	74	85
Colorado	70	72	63	65	88	84
Florida	48	48	50	58	75	83
Georgia	36	40	45	55	60	86
Idaho	48	54	52	61	91	92
Illinois	60	57	58	56	81	79
Indiana	50	50	45	43	79	79
Iowa	54	60	51	60	72	75
Kansas	53	61	54	64	76	82
Kentucky	39	43	38	50	65	75
Louisiana	34	42	30	30	69	77
Maryland ²	48	48	55	55	70	77
Michigan	50	52	43	50	81	81
Minnesota	56	59	49	59	78	82
Mississippi	40	40	41	42	69	69
Missouri	42	45	37	49	67	70
Montana	58	62	48	54	83	83
Nebraska	60	62	57	57	84	84
New Hampshire ³	55	64	45	58	83	94
New Jersey	56	56	58	58	91	91
New Mexico	30	30	35	28	51	42
New York	66	62	56	56	83	81
North Carolina	45	43	39	50	70	76
North Dakota	60	63	61	64	81	82
Ohio	40	39	36	36	60	63
Oklahoma	42	41	44	48	73	75
Oregon	61	60	53	63	83	83
Pennsylvania	40	40	35	39	62	64
South Carolina	27	35	39	39	74	74
South Dakota	62	61	53	65	79	82
Tennessee	39	39	33	40	65	65
Texas	39	46	36	47	72	75
Utah	56	70	52	76	82	92
Virginia	44	44	38	40	68	70
Washington	53	51	48	52	85	86
West Virginia	32	45	25	35	61	62
Wisconsin	54	54	38	45	80	82
Wyoming	58	58	44	51	86	88
United States ⁴	48	49	44	52	73	75

¹ Includes Arizona and Nevada.

² Includes Delaware and Maryland.

³ Includes Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont.

⁴ Excludes Alaska and Hawaii.

Use of Internet – States and United States: 2017 and 2019

[Agricultural inputs include seed, fertilizer, chemicals, veterinarian supplies, feed, machinery, replacement parts, farm supplies, office equipment, etc. Agricultural marketing activities include direct sales of commodities, on-line crop and livestock auctions, on-line market advisory services, commodity price tracking, etc.]

State	Farms			
	Purchase agricultural inputs over Internet		Conduct agricultural marketing activities over Internet	
	2017	2019	2017	2019
	(percent)			
Alabama	19	17	10	15
Arizona ¹	28	26	27	22
Arkansas	19	25	16	21
California	32	27	22	23
Colorado	42	40	38	30
Florida	26	29	17	20
Georgia	19	25	12	16
Idaho	27	29	17	22
Illinois	24	21	26	25
Indiana	24	19	21	20
Iowa	21	25	28	34
Kansas	26	33	17	25
Kentucky	20	17	17	17
Louisiana	19	25	10	11
Maryland ²	23	36	21	31
Michigan	26	34	17	25
Minnesota	23	27	26	31
Mississippi	27	25	12	16
Missouri	25	21	17	12
Montana	32	29	24	26
Nebraska	22	25	22	26
New Hampshire ³	42	41	26	33
New Jersey	42	44	27	27
New Mexico	28	16	23	12
New York	42	42	25	24
North Carolina	16	29	19	19
North Dakota	25	30	29	29
Ohio	16	16	15	15
Oklahoma	18	24	16	13
Oregon	30	42	15	29
Pennsylvania	26	24	18	14
South Carolina	17	15	11	18
South Dakota	23	28	28	26
Tennessee	21	24	13	19
Texas	15	15	10	10
Utah	27	34	29	38
Virginia	25	20	17	11
Washington	37	31	30	30
West Virginia	23	20	9	17
Wisconsin	27	23	21	22
Wyoming	32	27	20	30
United States ⁴	24	24	19	19

¹ Includes Arizona and Nevada.

² Includes Delaware and Maryland.

³ Includes Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont.

⁴ Excludes Alaska and Hawaii.

Internet Access of Reports, Services, and Websites – States and United States: 2017 and 2019

[Reference period for access and usage of USDA reports, research information, and services is the last 12 months prior to June 1 of survey year]

State	Farms					
	Access USDA/NASS reports over Internet		Access other USDA reports/services over Internet		Access other federal government websites over Internet	
	2017	2019	2017	2019	2017	2019
	(percent)					
Alabama	6	6	12	13	8	12
Arizona ¹	19	10	20	20	35	27
Arkansas	12	18	20	24	17	24
California	16	17	22	27	35	32
Colorado	22	15	36	32	33	34
Florida	11	18	17	24	20	31
Georgia	8	8	15	20	15	23
Idaho	13	19	20	25	18	24
Illinois	17	18	27	26	18	22
Indiana	13	12	20	23	22	18
Iowa	15	17	24	25	17	19
Kansas	12	20	21	29	22	26
Kentucky	5	10	13	14	12	16
Louisiana	7	7	10	13	9	14
Maryland ²	13	11	24	28	26	26
Michigan	8	13	14	17	20	24
Minnesota	11	16	20	25	19	22
Mississippi	8	9	17	18	19	17
Missouri	11	9	16	14	14	11
Montana	16	17	26	24	29	25
Nebraska	15	18	26	30	24	23
New Hampshire ³	15	20	28	34	28	30
New Jersey	11	9	21	18	32	33
New Mexico	7	9	10	12	10	10
New York	13	9	24	16	32	27
North Carolina	11	10	15	20	15	20
North Dakota	21	20	34	34	25	29
Ohio	7	7	14	14	17	12
Oklahoma	9	10	21	24	18	15
Oregon	10	19	22	27	23	36
Pennsylvania	10	10	15	15	20	14
South Carolina	10	10	16	16	9	5
South Dakota	12	15	24	31	21	23
Tennessee	12	11	17	16	18	20
Texas	5	6	12	10	17	11
Utah	24	14	29	30	20	26
Virginia	6	8	15	15	14	21
Washington	16	13	21	21	37	30
West Virginia	2	7	12	15	9	20
Wisconsin	12	15	23	22	19	25
Wyoming	17	13	25	16	29	31
United States ⁴	11	12	19	20	20	21

¹ Includes Arizona and Nevada.

² Includes Delaware and Maryland.

³ Includes Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont.

⁴ Excludes Alaska and Hawaii.

Conducting Business on the Internet – States and United States: 2017 and 2019

State	Farms					
	Conduct business with any USDA website		Conduct business with any other Federal government website		Conduct business with any non-agricultural website	
	2017	2019	2017	2019	2017	2019
	(percent)					
Alabama	6	7	4	4	27	36
Arizona ¹	23	24	9	4	46	38
Arkansas	12	14	10	14	33	41
California	10	18	16	18	63	62
Colorado	12	14	18	18	64	62
Florida	14	11	14	13	56	54
Georgia	7	14	8	16	31	50
Idaho	9	14	9	15	66	68
Illinois	10	11	7	7	58	55
Indiana	12	10	10	6	55	47
Iowa	12	13	8	9	50	55
Kansas	12	16	13	13	54	61
Kentucky	7	7	5	7	44	46
Louisiana	5	10	2	7	31	40
Maryland ²	8	14	6	12	48	51
Michigan	9	14	6	10	51	49
Minnesota	11	14	10	9	58	62
Mississippi	9	11	5	9	42	34
Missouri	8	8	8	5	42	50
Montana	10	14	9	12	65	68
Nebraska	13	15	8	11	56	57
New Hampshire ³	13	16	13	10	66	62
New Jersey	12	7	7	11	72	64
New Mexico	10	6	7	5	30	28
New York	8	12	16	17	64	60
North Carolina	6	8	4	7	51	59
North Dakota	18	20	12	15	55	61
Ohio	7	6	8	5	35	39
Oklahoma	6	6	5	5	37	52
Oregon	15	17	8	12	51	67
Pennsylvania	11	10	11	7	40	41
South Carolina	4	4	1	3	22	22
South Dakota	10	15	7	12	53	61
Tennessee	8	10	7	7	45	46
Texas	6	5	6	3	50	56
Utah	15	17	14	7	64	68
Virginia	7	8	7	5	39	44
Washington	14	14	16	11	63	64
West Virginia	4	3	2	5	24	37
Wisconsin	7	11	7	12	51	59
Wyoming	8	7	11	11	64	68
United States ⁴	9	11	9	9	50	53

¹ Includes Arizona and Nevada.

² Includes Delaware and Maryland.

³ Includes Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont.

⁴ Excludes Alaska and Hawaii.

Primary Method of Internet Access – States and United States: 2017 and 2019

[Primary method of Internet access for those operators who have access to the Internet]

State	Farms					
	Dialup		DSL		Cable	
	2017	2019	2017	2019	2017	2019
	(percent)					
Alabama	4	3	20	29	16	14
Arizona ¹	1	1	15	15	20	22
Arkansas	3	1	38	20	19	26
California	2	1	21	8	20	20
Colorado	1	-	19	29	13	16
Florida	4	8	25	12	21	16
Georgia	4	2	46	20	15	45
Idaho	2	2	32	13	14	16
Illinois	2	2	27	17	11	18
Indiana	2	2	27	26	11	11
Iowa	4	1	23	19	11	10
Kansas	2	1	24	27	10	6
Kentucky	4	3	26	20	18	17
Louisiana	3	1	30	25	18	8
Maryland ²	2	1	12	21	26	19
Michigan	1	1	22	14	22	20
Minnesota	2	2	25	23	7	4
Mississippi	3	1	26	25	8	17
Missouri	2	3	28	25	7	6
Montana	2	2	33	16	7	6
Nebraska	2	3	32	20	6	8
New Hampshire ³	3	1	38	34	46	42
New Jersey	1	-	25	30	43	31
New Mexico	2	-	34	27	11	12
New York	2	1	30	25	34	28
North Carolina	3	2	30	33	26	18
North Dakota	3	2	17	9	5	7
Ohio	5	1	25	37	17	15
Oklahoma	4	2	22	20	9	14
Oregon	4	3	28	21	25	26
Pennsylvania	4	1	35	39	28	30
South Carolina	5	4	20	19	29	29
South Dakota	3	1	18	13	15	10
Tennessee	2	3	29	18	16	27
Texas	4	3	29	23	15	10
Utah	1	2	30	22	29	24
Virginia	1	2	42	24	8	15
Washington	5	1	34	22	20	19
West Virginia	1	-	49	60	14	7
Wisconsin	2	2	39	32	11	8
Wyoming	5	1	19	34	4	4
United States ⁴	3	3	28	22	16	16

See footnote(s) at end of table.

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Primary Method of Internet Access – States and United States: 2017 and 2019 (continued)

[Primary method of Internet access for those operators who have access to the Internet]

State	Farms							
	Fiber optic		Mobile		Satellite		Other/unknown	
	2017	2019	2017	2019	2017	2019	2017	2019
	(percent)							
Alabama	9	6	7	26	44	22	-	-
Arizona ¹	14	12	16	24	33	25	1	1
Arkansas	3	13	23	27	14	13	-	-
California	1	1	19	14	29	47	8	9
Colorado	14	8	13	13	39	29	1	5
Florida	3	7	16	34	31	23	-	-
Georgia	3	3	11	11	20	18	1	1
Idaho	7	9	11	16	31	39	3	5
Illinois	6	12	18	16	32	32	4	3
Indiana	12	13	22	22	24	24	2	2
Iowa	17	19	22	22	20	25	3	4
Kansas	10	19	19	22	32	19	3	6
Kentucky	11	15	23	23	16	21	2	1
Louisiana	1	1	25	52	18	12	5	1
Maryland ²	9	9	18	22	25	25	8	3
Michigan	3	4	24	37	23	23	5	1
Minnesota	23	21	19	23	20	23	4	4
Mississippi	7	6	33	33	22	14	1	4
Missouri	11	17	17	23	32	23	3	3
Montana	22	39	15	11	15	20	6	6
Nebraska	11	18	21	20	17	27	11	4
New Hampshire ³	6	7	4	4	2	10	1	2
New Jersey	8	8	12	20	2	9	9	2
New Mexico	4	10	28	33	13	18	8	-
New York	2	2	18	21	8	21	6	2
North Carolina	4	6	20	23	15	15	2	3
North Dakota	53	61	11	10	8	7	3	4
Ohio	4	4	12	12	29	29	8	2
Oklahoma	4	10	27	23	30	30	4	1
Oregon	4	6	13	15	20	22	6	7
Pennsylvania	3	3	20	20	5	5	5	2
South Carolina	4	4	27	15	14	28	1	1
South Dakota	27	36	16	15	17	20	4	5
Tennessee	12	8	20	27	17	16	4	1
Texas	5	10	18	17	27	34	2	3
Utah	7	13	7	11	23	23	3	5
Virginia	5	11	21	21	19	24	4	3
Washington	4	7	12	14	21	33	4	4
West Virginia	7	6	13	11	16	16	-	-
Wisconsin	6	9	24	25	16	23	2	1
Wyoming	13	17	23	16	30	26	6	2
United States ⁴	9	12	19	18	23	26	2	3

- Represents zero.

¹ Includes Arizona and Nevada.

² Includes Delaware and Maryland.

³ Includes Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont.

⁴ Excludes Alaska and Hawaii.

Farm Numbers

To help equate the percentages published in this report to actual farm counts, a table showing "Number of Farms by States and United States" from the February 2018 NASS publication *Farms, Land in Farms* is included below. A farm is "any place from which \$1,000 or more of agricultural products were produced and sold, or normally would have been sold, during the year."

Number of Farms by States and United States: 2017 and 2018

[2019 number of farms not available until February 2020]

State	Farms	
	2017	2018
	(number)	
Alabama	40,600	39,700
Arizona	19,100	19,200
Arkansas	42,600	42,500
California	70,500	69,400
Colorado	38,900	38,900
Delaware	2,300	2,300
Florida	47,600	47,500
Georgia	42,400	41,600
Idaho	25,000	24,800
Illinois	72,700	72,000
Indiana	56,600	56,100
Iowa	86,100	86,000
Kansas	58,600	58,900
Kentucky	76,000	75,100
Louisiana	27,400	27,400
Maryland	12,400	12,400
Michigan	47,600	47,000
Minnesota	68,800	68,500
Mississippi	35,000	34,700
Missouri	95,300	95,000
Montana	27,000	26,900
Nebraska	46,300	45,900
Nevada	3,400	3,400
New Hampshire ¹	32,300	32,300
New Jersey	9,900	9,900
New Mexico	25,000	24,700
New York	33,400	33,400
North Carolina	46,400	46,400
North Dakota	26,400	26,100
Ohio	77,800	77,800
Oklahoma	78,500	77,300
Oregon	37,600	37,200
Pennsylvania	53,200	53,000
South Carolina	24,800	24,600
South Dakota	30,000	29,600
Tennessee	70,000	70,000
Texas	248,500	247,000
Utah	18,400	18,100
Virginia	43,200	42,500
Washington	35,800	35,700
West Virginia	23,600	23,400
Wisconsin	64,800	64,800
Wyoming	11,900	11,900
United States ²	2,033,700	2,020,900

¹ Includes Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont.

² Excludes Alaska and Hawaii.

Statistical Methodology

Survey Procedures: The June Agricultural Survey is conducted every year to provide estimates of farm numbers and land in farms, crop acres planted, grains and oilseeds in storage, livestock inventories, and land values. In the odd-numbered years from 1997 through 2019, questions were added to the survey form that asked the operator about access and use of computers. Some states were combined due to their low number of responses. When this occurs, it is footnoted in the tables. Estimates are revised periodically to provide a better foundation for current and future estimates. Revisions are made when sufficient data become available to check the accuracy of the original estimates.

Estimating Procedures: The computer use data are separated from the June Area dataset and summarized. Since all States conduct identical surveys, the State data can be pooled and national survey results computed. The summary results provide point estimates and their standard errors for each data series being estimated. Once editing is complete, the data are summarized. Survey results are reviewed and State and National estimates are established.

Survey results are delivered to a subject matter specialist for review and acceptance. All review is performed in NASS's Washington, D.C. Headquarters. Current results are reviewed, in tabular form, against the historical data series for consistency and reasonableness.

Revision Policy: For non-census years, computer use values are subject to a biennial revision. After the 5-year Census of Agriculture is completed, computer use estimates are subject to revisions.

Reliability: The 2019 computer usage estimates are based on responses from more than 20,000 agricultural operations, and represent all sizes and types of farms. Coefficients of variations (CVs) at the national level in 2019 were 13.5 percent or less.

Published Estimates: The Farm Computer Usage and Ownership State and National estimates are published in August in odd numbered years. While the June Area Survey is the primary source of data for the estimates, supplemental survey data and potential previous revisions are also considered, as described in the more detailed NASS Computer Use Methodology and Quality Measures publication.

Information Contacts

Listed below are the commodity statisticians in the Environmental, Economics, and Demographics Branch of the National Agricultural Statistics Service to contact for additional information. E-mail inquiries may be sent to nass@nass.usda.gov.

Jody McDaniel, Chief, Environmental, Economics, and Demographics Branch.....	(202) 720-6146
Bruce Boess, Head, Economics Section.....	(202) 720-4447
Eric Barnes – Cash Receipts, Farm Computer Use, Land Values	(202) 690-3225
Stephanie Brennan – Farm Production Expenditures	(202) 690-0392
Kuan Chen – Prices, Prices Indexes, Parity Prices	(202) 690-3347
Ryan Cowen – Cash Rents, Farms, Land in Farms, Grazing Fees	(202) 720-2250
Doug Farmer – Chemical Use	(202) 690-3229
Stephen Habets – Prices, Prices Indexes, Parity Prices	(202) 720-9168
Michael Mathison – Farm Production Expenditures	(202) 720-3243
John Stephens – Prices, Prices Indexes, Parity Prices	(202) 720-8844
Theresa Varner – Farm Labor.....	(202) 690-3231

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- Cornell’s Mann Library has launched a new website housing NASS’s and other agency’s archived reports. The new website, <https://usda.library.cornell.edu>. All email subscriptions containing reports will be sent from the new website, <https://usda.library.cornell.edu>. To continue receiving the reports via e-mail, you will have to go to the new website, create a new account and re-subscribe to the reports. If you need instructions to set up an account or subscribe, they are located at: <https://usda.library.cornell.edu/help>. You should whitelist notifications@usda-esmis.library.cornell.edu in your email client to avoid the emails going into spam/junk folders.

For more information on NASS surveys and reports, call the NASS Agricultural Statistics Hotline at (800) 727-9540, 7:30 a.m. to 4:00 p.m. ET, or e-mail: nass@usda.gov.

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