

# Northeast SARE

## Grants Portfolio Review



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# Introduction

Since 1988, the Northeast Sustainable Agriculture Research and Education (SARE) Program has offered competitive grants for farmers, researchers, educators, graduate students, service providers, and others. Over the past 31 years, Northeast SARE has funded more than \$76.5 million in grants to conduct 2,091 projects.

This grant portfolio review report has been created to document Northeast SARE's grant programs through a number of lenses--including state, commodities and practices, and applicant demographics--to allow for Administrative Council members and staff to reflect on Northeast SARE's grant investments. Although Northeast SARE also supports state-based programs, these have been largely left out of this report to provide focus on the competitive grant programs. Sources of data used in this report include the 2017 Census of Agriculture, Bureau of Labor and Statistics, SARE's national project database, and internal records.

## What's Inside

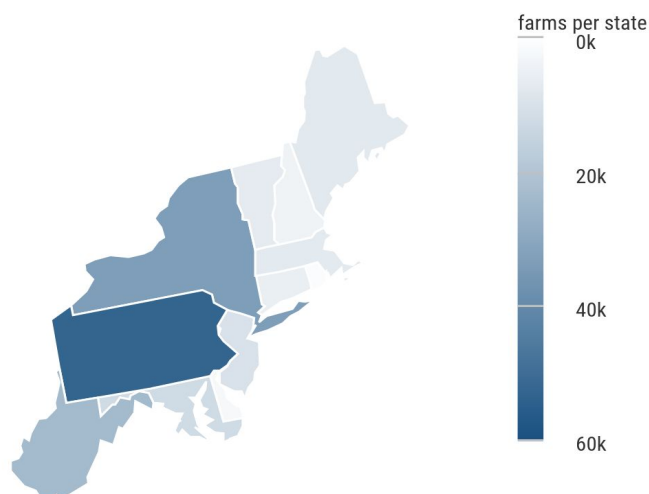
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# Agriculture in the Region

Northeast SARE serves Connecticut, Delaware, Massachusetts, Maryland, Maine, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, West Virginia, and Washington, D.C.

Within these states are 167,167 working farms that cover nearly 25 million acres (2017 Census of Agriculture). This includes 13.6 million acres of cropland and 2.8 million of pasture and rangeland. Of these farms, 104,246 grow and sell crops and 81,731 sell livestock and their products. New York, Pennsylvania, and West Virginia, as the largest states in the Northeast, contain the majority of farms and farmland acres in the region.

**Graph 1. Concentration of farms in the Northeast (2017 Census of Agriculture).**



The Northeast region has a total of 285,210 producers. Pennsylvania and New York have the most producers with 90,461 and 57,865 respectively. Of the total producers in the region, 177,716 are male and 107,494 are female.

Across the region, grains/oilseeds/beans, hay, and cattle are the top commodities grown on Northeast farms. However, the highest grossing commodities for the region as a whole are milk from cows, poultry/eggs, and nursery/greenhouse/floriculture/sod crops. Dairy is the top commodity sold in New York, Pennsylvania and Vermont. Poultry and eggs are the top products in Delaware, Maryland, Maine and West Virginia. In Connecticut, Massachusetts, New Hampshire, New Jersey and Rhode Island, nursery/greenhouse/floriculture/sod crops provide the top sales among agricultural products.

Delaware producers see the largest sales per farm on average with \$636,826 dollars. The lowest sales per farm on average are in West Virginia with \$31,931 dollars.

## 167,167

### Northeast farms

Most of the Northeast's farms are located in PA (1/3 of the region's farms), followed by NY and WV. The fewest farms in the Northeast are found in RI, DE and NH.

## 24.9

### million acres

Of the total land on Northeast farms, 55% is cropland (13.6 million acres), 38% is woodland (9.5 million acres), and 11% is pasture (2.8 million acres).



### top farm products

Milk from cows is the top farm product sold in the Northeast at \$5.6 billion. Poultry and eggs come in second at \$4.9 billion sold, followed by nursery / greenhouse / floriculture / sod crops at \$2.8 billion.

## 3.9%

### direct farm sales

While the value of farm products sold directly to consumers remains low, the number of farms with direct to consumer sales is high in the New England states -- more than 23 to 29% of farms in these states sell direct.

## 5.5%

### organic farm sales

The value of certified organic products across the Northeast was 5.5% of total sales. PA, NY, VT and ME had the highest organic sales in the region.

In 2017, 25,542 farms sold products directly to consumers at a total value of \$842.5 million. The region also has 4,430 certified organic farms. The states with the largest percentages of organic farms are Vermont (9.4%), Maine (7.3%), and New York (4%). Total sales in the region in 2017 for certified organic products was \$1.2 billion.

**Table 1. Top 3 products sold, by value, for each Northeast state (2017 Census of Agriculture).**

CT	nursery/greenhouse/etc	milk from cows	vegetables
DE	poultry/eggs	grains/oilseeds/beans	vegetables
MD	poultry/eggs	grains/oilseeds/beans	nursery/greenhouse/etc
ME	vegetables	milk from cows	nursery/greenhouse/etc
MA	nursery/greenhouse/etc	vegetables	fruit/nuts/berries
NH	nursery/greenhouse/etc	milk from cows	vegetables
NJ	nursery/greenhouse/etc	vegetables	fruit/nuts/berries
NY	milk from cows	grains/oilseeds/beans	cattle and calves
PA	milk from cows	poultry/eggs	nursery/greenhouse/etc
RI	nursery/greenhouse/etc	vegetables	milk from cows
VT	milk from cows	hay	cattle and calves
WV	poultry/eggs	cattle and calves	hay

## Grant Applicant Pool

The pool of possible grant applicants in the region includes commercial farmers; college and university faculty, educators, and graduate students; farm and food system nonprofit staff; federal, state, and local government employees; and agricultural service providers (eg., veterinarians, feed dealers, farm consultants, etc.). While exact numbers are difficult to determine, we know that the possible applicant pool includes the following audiences.

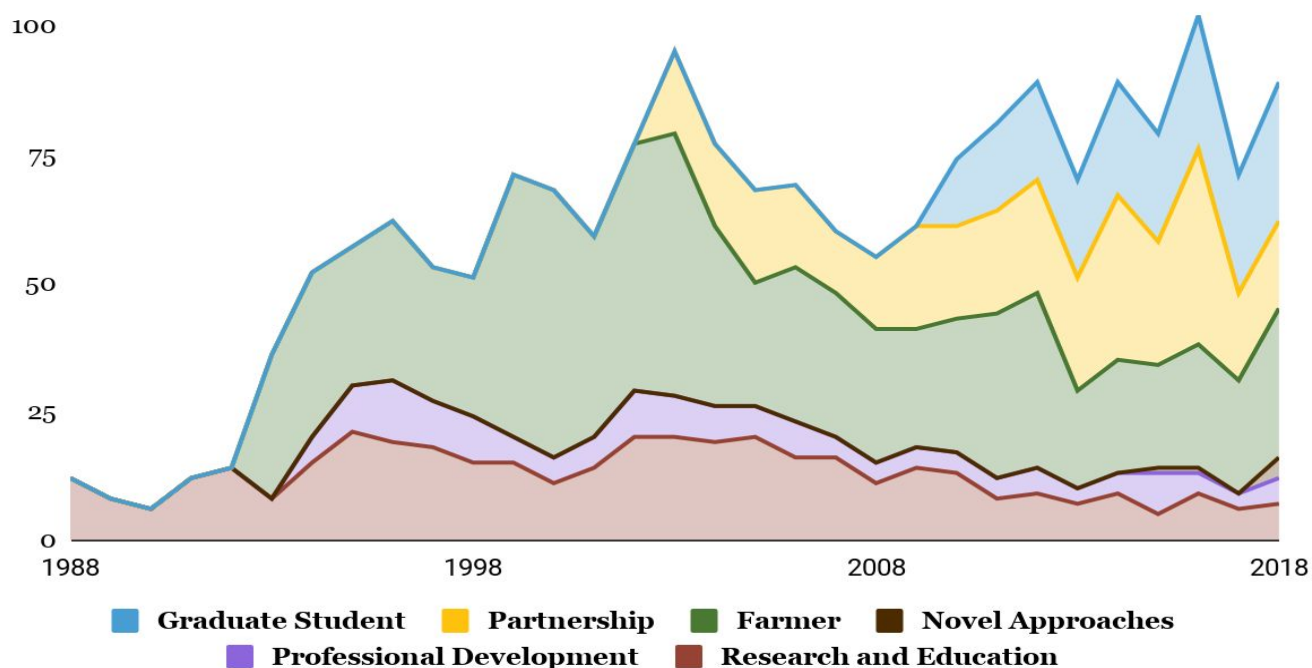
<b>Audience</b>	<b>Population</b>
Farmers	285,210 total producers (2017 Census of Ag)
College & university faculty & staff	Est. 48,340 individuals (Bureau of Labor Statistics, May 2018). We know there are 1,036 public and private universities and colleges located in the Northeast.
Graduate students	Unknown for the Northeast. However, nationally, 1,508 doctorate and 6,681 masters degrees in agriculture and natural resources were awarded in 2015- 2016 (2017 Digest of Education Statistics).
Federal, state, local government employees	More than 4,117 individuals. From the USDA service center employee directories, we know that 4,117 employees work for USDA agencies in the Northeast states. The population of state and local government employees are unknown at this time.
Ag service sector	Est. 17,850 professionals (Bureau of Labor Statistics, May 2018). These include veterinarians, farm and home management advisors, animal breeders, ag inspectors, and first-line supervisors of farming, fishing, and forestry workers.
Nonprofits	329+ organizations. From the Northeast Sustainable Agriculture Working Group, we know that there are at least 329 nonprofit organizations working on farm and food systems in the region.

# Overall Look at Program

Northeast SARE has funded 2,091 projects, totaling \$76.5 million, since its start in 1988.

Grant Program	Year First Awarded	Total Grants	Total Amount
Research and Education	1988	409	\$44,842,573
Professional Development	1994	154	\$12,678,472
Research for Novel Approaches (includes Agroecosystem)	2018	16	\$2,856,269
Farmer	1993	836	\$5,691,205
Partnership (includes Sustainable Community)	2003	430	\$5,296,984
Graduate Student	2010	187	\$2,657,259

**Graph 2. Number of Northeast SARE projects funded over time by grant program.** To assess the distribution of projects funded by each grant program overall, the yearly totals from each are displayed over the lifetime of the program. The programs with the most projects funded over Northeast SARE's lifetime are Farmer, Research and Education, and Partnership. The years 2012 and 2016 saw the most total projects awarded with 101 and 105 projects respectively. The Graduate Student and Novel Approaches programs have seen steady increases in total numbers awarded each year.



# By Grant Program

By analyzing data through the lens of the separate grant programs, we are able to compare the size and awards for each. While reviewing the information, please note that some programs are older than others (for example, Research and Education began in 1988, while Research for Novel Approaches was recently created in 2017).

It should also be noted that some programs award larger individual grants than others. For example, an average Research and Education grant award is \$114,000, whereas an average Farmer grant award is \$7,000.

**Graph 3. Northeast SARE award totals (\$) over time by grant program.** To examine the distribution of funding amounts by grant program, the award totals for each are presented by year over the lifetime of the program. The most funding in total has gone to the Research and Education (\$45 million), Professional Development (\$12.6 million), and Farmer (\$5.7 million) grant programs; these higher award totals are attributed to the longevity of these grant programs (as compared to Graduate Student and Novel Approaches), and higher maximum award amounts (in the case of Research and Education and Professional Development).

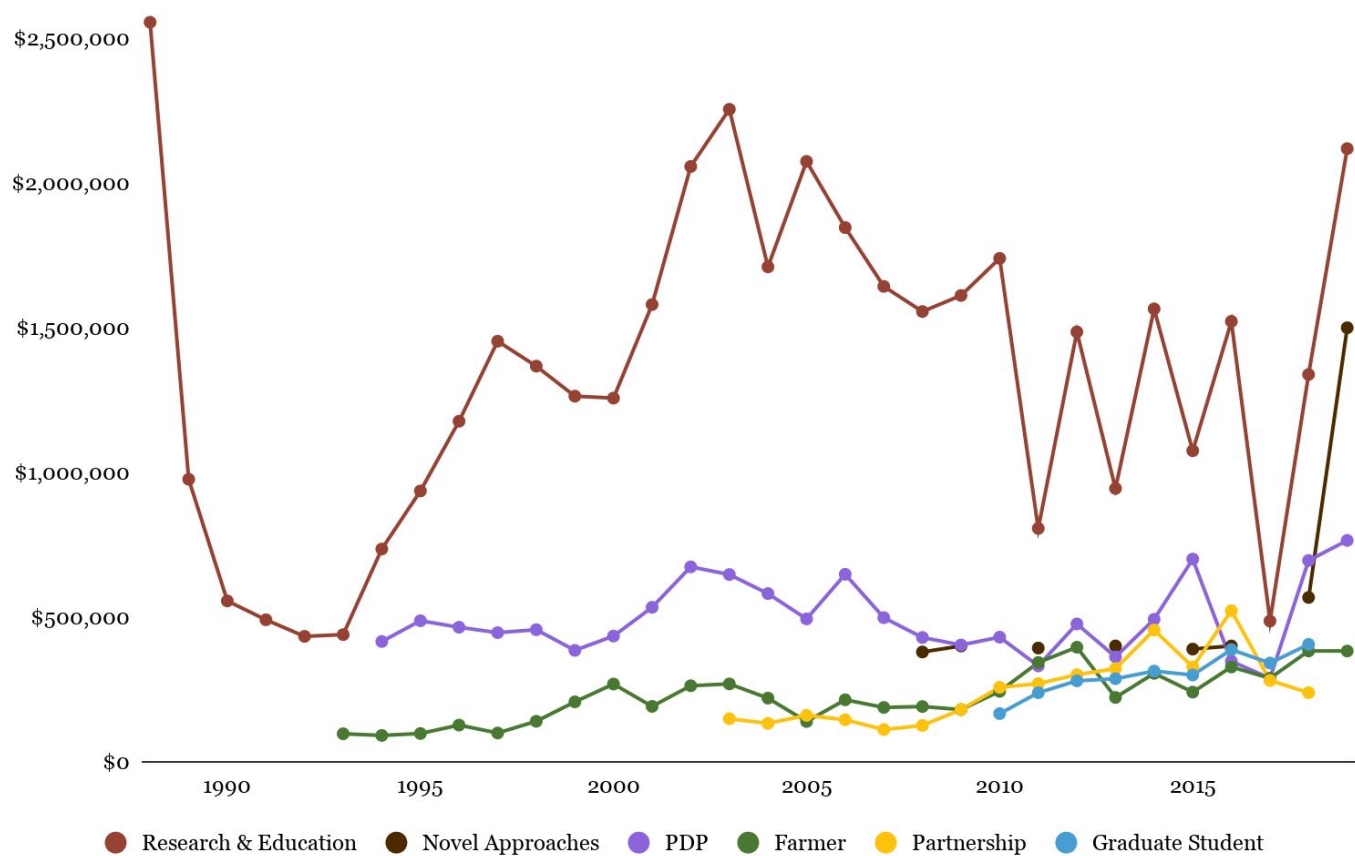


Table 2. Northeast SARE proposals and projects funded, number (#) each year, starting with current year.

Farmer (FNE)	'19	'18	'17	'16	'15	'14	'13	'12	'11	'10	'09	'08	'07	'06	'05	'04	'03	'02	'01	'00	'99	'98	'97	'96	'95	'94	'93	'92	'91	'90	'89	'88			
Reviewed	56	63	39	54	55	54	44	57	94	58	77	62	66	45	68	125	132	147	154	120	146	88	93	103	154	90	168	----	----	----	----	----			
Fundable	36	37	23	26	31	33	28	39	52	31	32	29	28	35	28	77	65	70	86	?	?	?	?	?	61	?	?	----	----	----	----	----			
Awarded	31	31	23	26	20	25	20	35	33	27	23	29	28	32	24	38	52	50	46	62	62	41	30	44	39	40	36	----	----	----	----	----			
Partnership (ONE)*	'19	'18	'17	'16	'15	'14	'13	'12	'11	'10	'09	'08	'07	'06	'05	'04	'03	'02	'01	'00	'99	'98	'97	'96	'95	'94	'93	'92	'91	'90	'89	'88			
Reviewed	55	31	41	55	48	71	72	61	66	100	101	78	79	122	37	34	47	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----			
Fundable	32	22	22	42	29	45	44	35	42	66	44	33	47	41	21	19	28	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----			
Awarded		17	19	38	24	32	31	32	28	36	30	33	32	33	18	16	16	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----			
*The Sustainable Community (CNE) grant program was combined with the Partnership grant program in 2014. CNE numbers numbers have been combined with Partnership grant program numbers for 2006 through 2013.																																			
Graduate Student (GNE)	'19	'18	'17	'16	'15	'14	'13	'12	'11	'10	'09	'08	'07	'06	'05	'04	'03	'02	'01	'00	'99	'98	'97	'96	'95	'94	'93	'92	'91	'90	'89	'88			
Reviewed	58	61	49	65	56	50	43	54	44	51	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----			
Fundable	50	41	36	56	39	41	33	31	37	32	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----			
Awarded		28	23	27	21	22	20	20	17	13	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----			
Research & Education (LNE)	'19	'18	'17	'16	'15	'14	'13	'12	'11	'10	'09	'08	'07	'06	'05	'04	'03	'02	'01	'00	'99	'98	'97	'96	'95	'94	'93	'92	'91	'90	'89	'88			
Preproposals	58	60	70	76	63	90	92	90	113	130	124	102	123	136	126	188	210	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----			
Proposals invited	38	27	28	35	22	31	28	33	34	42	45	45	57	58	54	57	60	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----			
Tier 1 Review	31	20	19	25	17	28	21	28	24	34	35	32	38	44	49	44	51	71	57	70	65	65	74	76	55	48	33	52	?	?	?	?			
Tier 2 Review	25	16	12	15	10	19	17	18	19	24	27	26	30	33	37	31	27	39	32	----	----	----	----	----	----	----	----	----	----	----	----	----			
Fundable	14	11	6	9	7	15	8	11	11	13	15	17	23	22	26	22	21	25	19	----	----	----	----	----	----	----	----	----	----	----	----	----			
Awarded	12	7	6	9	5	9	6	9	7	13	12	10	15	16	21	19	20	20	14	11	16	16	18	16	12	12	6	4	5	5	8	11			
Research Only (LNEr)**	'19	'18	'17	'16	'15	'14	'13	'12	'11	'10	'09	'08	'07	'06	'05	'04	'03	'02	'01	'00	'99	'98	'97	'96	'95	'94	'93	'92	'91	'90	'89	'88			
Preproposals	73	64	----	----	----	----	----	----	----	4	7	13	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----			
Proposals invited	29	18	----	1	1	----	1	----	1	2	2	2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----			
Tier 1 Review	24	16	----	1	1	----	1	----	1	2	2	2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----			
Tier 2 Review	16	15	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----			
Fundable	15	9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----			
Awarded	10	4	----	1	1	----	1	----	1	0	1	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----			
**Research Only includes the Research for Novel Approaches grant program numbers for 2018-2019, and the Agroecosystems Research program numbers for 2008-2016.																																			
Professional Development (ENE)	'19	'18	'17	'16	'15	'14	'13	'12	'11	'10	'09	'08	'07	'06	'05	'04	'03	'02	'01	'00	'99	'98	'97	'96	'95	'94	'93	'92	'91	'90	'89	'88			
Preproposals	16	18	16	13	16	16	18	25	20	24	21	9	24	26	37	41	43	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----			
Proposals invited	13	8	11	9	13	8	11	12	14	13	13	7	16	18	20	21	21	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----			
Tier 1 Review	9	7	9	5	13	7	11	8	10	11	9	5	13	15	13	18	16	16	13	14	13	14	26	37	10	9	----	----	----	----	----				
Tier 2 Review	9	5	8	4	13	5	5	7	5	9	6	4	10	15	13	16	14	12	----	----	----	----	----	----	----	----	----	----	----	----	----	----			
Fundable	6	5	3	4	8	4	4	5	4	4	5	4	7	10	9	12	11	10	7	----	----	----	----	----	----	----	----	----	----	----	----	----			
Awarded	6	5	3	4	8	4	3	5	4	4	4	4	4	7	6	7	8	9	6	5	6	11	9	13	9	5	----	----	----	----	----				
Total competitive grants awarded		92	74	105	79	92	81	101	90	93	70	77	79	88	69	80	96	79	66	78	84	68	57	73	60	57	42	4	5	5	8	11			
State Programs	'19	'18	'17	'16	'15	'14	'13	'12	'11	'10	'09	'08	'07	'06	'05	'04	'03	'02	'01	'00	'99	'98	'97	'96	'95	'94	'93	'92	'91	'90	'89	'88			
		16	16	15	16	16	16	15	14	15	13	16	16	16	16	16	16	16	15	15	15	15	15	15	15	15	----	----	----	----	----	----			

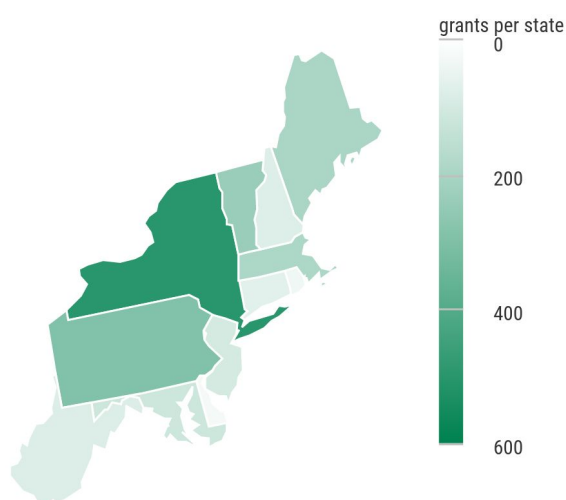
Table 3. Northeast SARE proposals and projects funded, dollar value (\$) each year, starting with current year.

Farmer	'19	'18	'17	'16	'15	'14	'13	'12	'11	'10	'09	'08	'07	'06	'05	'04	'03	'02	'01	'00	'99	'98	'97	'96	'95	'94	'93	'92	'91	'90	'89	'88
Reviewed	703,737	780,571	482,106	697,292	660,419	683,616	511,562	657,962	995,273	626,894	590,983	450,030	480,557	327,222	446,838	818,169	929,819	950,476	921,503	618,367	829,202	?	?	?	?	249,408	?	----	----	----	----	----
Fundable	446,536	459,494	288,354	327,351	364,263	437,009	318,050	427,440	533,684	289,670	234,193	190,523	187,367	235,276	164,159	474,698	378,668	410,181	410,236	?	?	?	?	?	131,696	?	?	----	----	----	----	----
Awarded	382,384	382,764	288,354	327,351	240,472	305,318	221,850	395,648	342,803	243,082	180,001	190,523	187,367	213,780	138,803	219,562	268,744	262,402	191,068	268,326	206,685	139,565	99,088	126,456	97,324	90,659	96,447	----	----	----	----	----
Partnership*	'19	'18	'17	'16	'15	'14	'13	'12	'11	'10	'09	'08	'07	'06	'05	'04	'03	'02	'01	'00	'99	'98	'97	'96	'95	'94	'93	'92	'91	'90	'89	'88
Reviewed	1,486,306	441,933	592,924	769,593	681,814	1,012,711	1,010,528	875,452	913,575	1,367,024	1,649,717	732,251	976,281	1,133,208	334,207	286,192	419,857	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Fundable	873,348	303,183	325,324	578,970	401,041	646,292	622,581	490,550	582,472	901,461	614,584	304,020	500,360	381,043	189,518	152,272	256,352	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Awarded		238,484	280,712	521,916	327,498	455,135	447,426	447,704	382,327	494,210	360,000	304,020	363,716	306,849	160,012	132,385	148,300	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
*The Sustainable Community (CNE) grant program was combined with the Partnership grant program in 2014. CNE numbers numbers have been combined with Partnership grant program numbers for 2006 through 2013.																																
Graduate Student	'19	'18	'17	'16	'15	'14	'13	'12	'11	'10	'09	'08	'07	'06	'05	'04	'03	'02	'01	'00	'99	'98	'97	'96	'95	'94	'93	'92	'91	'90	'89	'88
Reviewed	841,998	888,613	726,684	936,968	790,871	690,218	615,228	760,381	613,196	698,154	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Fundable	725,966	595,424	533,678	805,441	539,907	563,034	470,713	436,466	513,985	417,579	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Awarded		405,373	340,873	387,176	299,483	312,994	286,684	279,321	238,275	166,059	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Research & Education	'19	'18	'17	'16	'15	'14	'13	'12	'11	'10	'09	'08	'07	'06	'05	'04	'03	'02	'01	'00	'99	'98	'97	'96	'95	'94	'93	'92	'91	'90	'89	'88
Preproposals	info not requested		10,603,276	10,767,487	9,479,384	13,179,045	13,264,825	12,100,939	15,397,857	16,894,428	15,845,100	10,588,425	14,903,273	16,293,298	14,652,861	21,129,248	21,063,465	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Proposals invited	info not requested		3,665,422	4,260,365	3,238,467	4,379,235	3,693,617	4,224,468	4,779,569	5,968,011	5,577,263	5,424,914	6,270,076	6,140,219	5,672,977	6,210,081	5,990,656	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Tier 1 Review	4,877,866	3,646,162	2,764,538	3,906,147	3,083,086	4,698,232	3,271,835	4,156,943	3,595,993	4,716,323	4,489,581	4,575,438	4,575,438	5,486,081	5,039,317	5,586,486	6,128,578	8,600,302	7,880,967	9,166,589	7,137,620	?	?	?	?	2,539,721	?	?	?	?	?	
Tier 2 Review	3,917,499	2,862,086	1,538,166	2,473,690	1,869,863	3,193,933	2,776,418	2,848,968	2,919,920	3,187,732	3,595,369	3,395,354	3,830,829	3,671,390	3,616,594	3,579,388	3,344,956	4,780,695	4,399,751	----	----	----	----	----	----	----	----	----	----	----	----	
Fundable	2,466,353	2,036,461	486,152	1,521,905	1,461,744	2,490,365	1,330,522	1,789,872	1,480,320	1,739,665	2,132,757	2,357,186	2,718,197	2,664,681	2,592,464	2,233,759	2,653,980	2,810,225	2,220,498	----	----	----	----	----	----	----	----	----	----	----	----	----
Awarded	2,119,057	1,338,275	486,152	1,521,905	1,074,836	1,565,106	944,368	1,485,555	806,350	1,739,665	1,611,483	1,555,961	1,642,747	1,846,193	2,074,860	1,710,388	2,255,075	2,057,355	1,580,154	1,256,744	1,263,327	1,367,113	1,453,379	1,176,711	935,749	735,036	439,127	433,109	490,443	555,580	976,068	2,555,987
Research Only**	'19	'18	'17	'16	'15	'14	'13	'12	'11	'10	'09	'08	'07	'06	'05	'04	'03	'02	'01	'00	'99	'98	'97	'96	'95	'94	'93	'92	'91	'90	'89	'88
Preproposals	info not requested		----	----	----	----	----	----	----	1,192,600	2,115,046	4,443,025	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Proposals invited	info not requested		----	400,000	400,000	----	400,000	----	400,000	748,000	768,800	799,800	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Tier 1 Review	3,746,400	2,372,730	----	400,000	389,111	----	400,000	----	392,658	788,013	764,333	778,087	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Tier 2 Review	2,539,340	2,176,796	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Fundable	2,339,574	1,487,902	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Awarded	1,499,844	567,550	----	400,000	389,118	----	400,000	----	392,658	0	400,000	379,087	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
**Research Only includes the Research for Novel Approaches grant program numbers for 2018-2019, and the Agroecosystems Research program numbers for 2008-2016.																																
Professional Development	'19	'18	'17	'16	'15	'14	'13	'12	'11	'10	'09	'08	'07	'06	'05	'04	'03	'02	'01	'00	'99	'98	'97	'96	'95	'94	'93	'92	'91	'90	'89	'88
Preproposals	info not requested		1,519,156	1,297,754	1,250,444	1,478,928	1,696,477	2,886,164	2,113,191	2,468,512	1,730,903	727,538	1,876,509	2,363,575	3,321,115	3,304,840	2,868,780	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Proposals invited	info not requested		1,042,782	828,270	1,086,240	792,807	1,121,882	1,056,144	1,530,313	1,467,052	1,118,525	601,838	1,350,809	1,837,225	1,683,019	1,642,550	1,554,882	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Tier 1 Review	1,192,748	1,013,631	888,085	425,719	1,096,220	823,761	1,131,268	766,547	1,034,277	1,442,725	952,071	597,580	1,381,221	1,446,775	1,217,463	1,768,893	1,386,459	1,181,631	1,662,748	1,218,368	847,262	?	?	?	?	?	----	----	----	----	----	
Tier 2 Review	1,192,748	715,617	810,905	347,429	1,096,220	538,216	660,017	608,907	403,746	1,105,722	720,881	444,393	983,656	1,446,775	1,188,666	1,485,459	1,186,153	883,372	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Fundable	764,720	715,617	287,795	347,429	700,288	484,712	528,281	476,143	331,095	430,310	561,310	444,393	761,611	961,535	751,145	1,085,644	890,063	773,532	850,529	----	----	----	----	----	----	----	----	----	----	----	----	----
Awarded	764,720	695,283	287,795	347,429	700,288	492,058	362,168	476,091	331,095	430,310	403,335	429,212	497,721	647,618	493,476	580,961	646,890															

# Awards by State

Considering state by state distribution of grant funds helps discern state-based concentrations of Northeast SARE investments. There are a variety of dynamics at play regarding a state's share of projects and funding, including state size and acreage, number of working farms, land grant university status, nonprofit sector involvement in sustainable agriculture research and education, and other factors that need to be taken into account when looking at the provided data.

**Graph 4. Total number of grants by state.** This choropleth map shows the proportion of grant numbers awarded by state across the region over the program's lifetime.

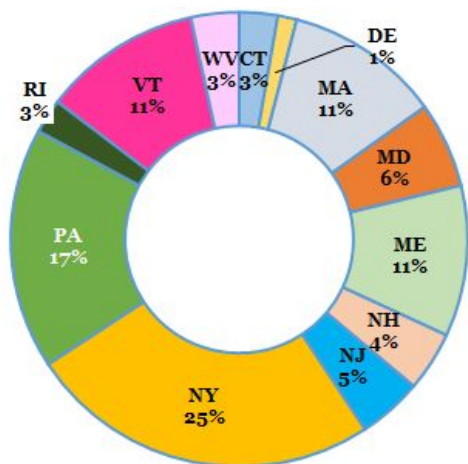


## Grants Awarded by State

A correlation can be seen between the states with the most farms and farmland acreage and the number of grants awarded by the program. New York and Pennsylvania have received the largest amount of grants with 502 and 292 respectively. Smaller states like Delaware have received just 24 grants total. It should also be noted that New York is home to Cornell University, which receives a large number of Research Education and Graduate grants.

Notably, Vermont and West Virginia break this association between farm and grant numbers. Vermont sees more grants; despite its rank as 8 of the 12 states in terms of number of farms in the region, it received the third largest amount of grants with 237 total. On the other hand, West Virginia ranks third in the number of farms, yet ranks as 8th in number of grants received with 80 total.

**Graph 5. Percent of total funding awarded by state.** The distribution of funding by state closely resembles the number of grant projects that have been awarded.



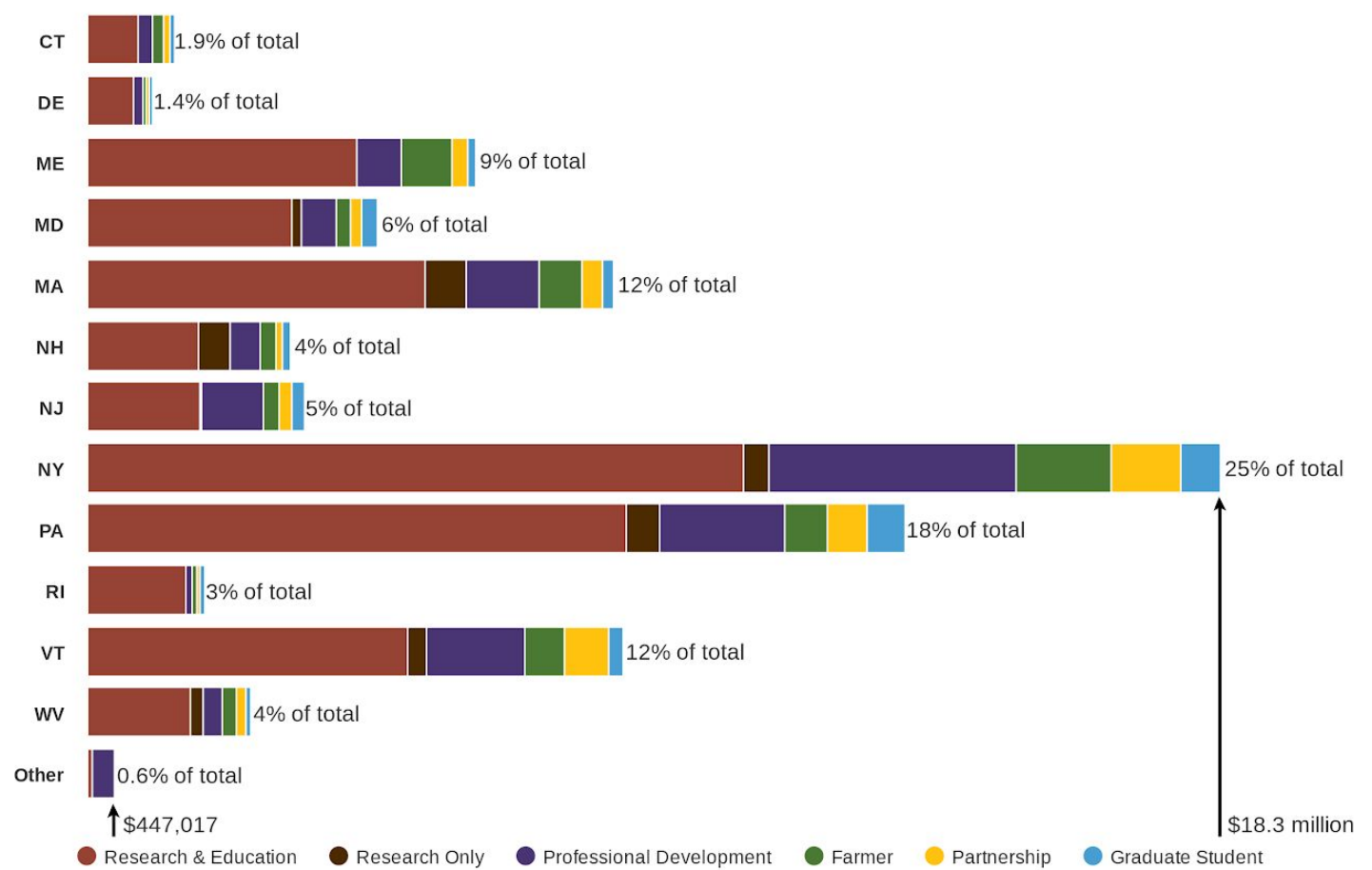
The states with the most funding over the lifetime of the program are New York (\$18.3 million), Pennsylvania (\$13.2 million), and Vermont (\$8.65 million). Despite this, the largest average funding per grant is seen in Rhode Island with an average of \$52,548 per grant. Pennsylvania and Massachusetts also have a larger average with \$45,234 and \$44,247 per grant respectively.

**Table 4. Total competitive grants conducted by program per state, 1988 to 2018 (Source: project database).**

This table shows the distribution of Northeast SARE grants (by number and total funding) by program by state. The Sustainable Community Grant numbers (active from 2006 to 2013) have been combined with the Partnership Grant data. Agroecosystem Grant numbers awarded before 2015 appear under the Research and Education program totals; the two Agroecosystem grants awarded in 2015 and 2016 appear within the Research for Novel Approaches as research only project types. Please note that total *award* numbers do not necessarily equal total number and amount of awards reported in the table as some projects drop out; the numbers below reflect contracted and conducted projects.

		Research and Education	Research for Novel Approaches	Professional Development	Farmer	Partnership	Graduate Student
<b>Connecticut</b>	#	18	0	3	28	14	6
	\$	\$1,398,144	--	\$227,995	\$140,607	\$164,534	\$84,297
<b>Delaware</b>	#	5	0	2	9	4	3
	\$	\$535,825	--	\$140,943	\$64,573	\$43,088	\$43,939
<b>Maine</b>	#	39	0	11	105	36	12
	\$	\$3,617,113	--	\$731,487	\$742,939	\$409,923	\$150,674
<b>Maryland</b>	#	32	0	8	44	21	18
	\$	\$3,348,765	--	\$555,690	\$239,971	\$257,156	\$257,908
<b>Massachusetts</b>	#	46	1	13	86	47	12
	\$	\$5,096,279	\$199,524	\$1,161,318	\$638,388	\$607,164	\$175,416
<b>New Hampshire</b>	#	10	2	4	40	19	9
	\$	\$1,785,367	\$515,786	\$376,059	\$262,924	\$194,027	\$129,990
<b>New Jersey</b>	#	21	1	13	29	20	14
	\$	\$1,738,164	\$41,504	\$829,754	\$248,106	\$242,419	\$189,509
<b>New York</b>	#	97	0	42	210	120	43
	\$	\$9,878,768	--	\$3,848,956	\$1,405,877	\$1,449,723	\$625,411
<b>Pennsylvania</b>	#	62	1	26	104	62	43
	\$	\$7,827,946	\$400,000	\$2,039,562	\$676,499	\$773,035	\$621,198
<b>Rhode Island</b>	#	11	0	1	12	4	5
	\$	\$1,252,625	--	\$104,400	\$70,750	\$66,661	\$72,367
<b>Vermont</b>	#	43	1	18	97	65	17
	\$	\$4,624,716	\$199,854	\$1,590,615	\$592,749	\$854,972	\$231,949
<b>West Virginia</b>	#	13	0	7	42	17	5
	\$	\$1,590,227	--	\$309,328	\$244,114	\$224,631	\$74,601
<b>D.C.</b>	#	1	0	0	0	0	0
	\$	\$79,577	--	--	--	--	--

**Graph 6. Percent of funds for all grant programs by state.** New York has received the largest share of Northeast SARE funds over the program’s lifetime.



# Commodities and Practices

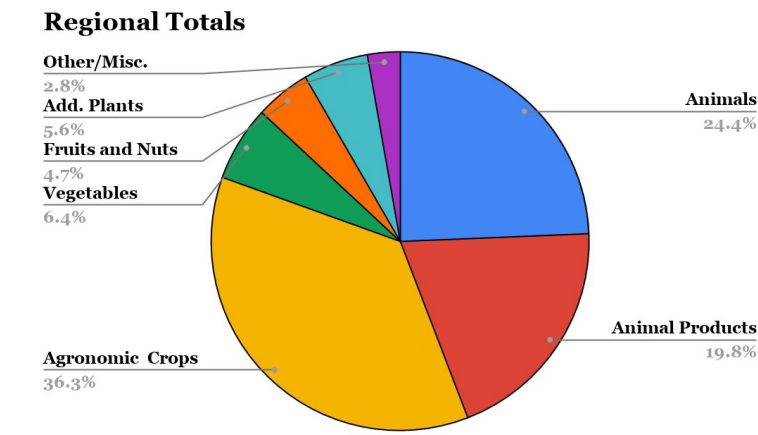
The representation of different commodities and practices in the portfolio is indicative of the areas of interest and expertise of grantees throughout the lifetime of the program. By comparing top commodities and practices occurring on farms within the region to those addressed by funded projects, gaps in topics addressed through Northeast SARE’s grant portfolio can be identified, helping to ascertain potential opportunities to fund areas that have not been explored as extensively in the past.

## Commodities

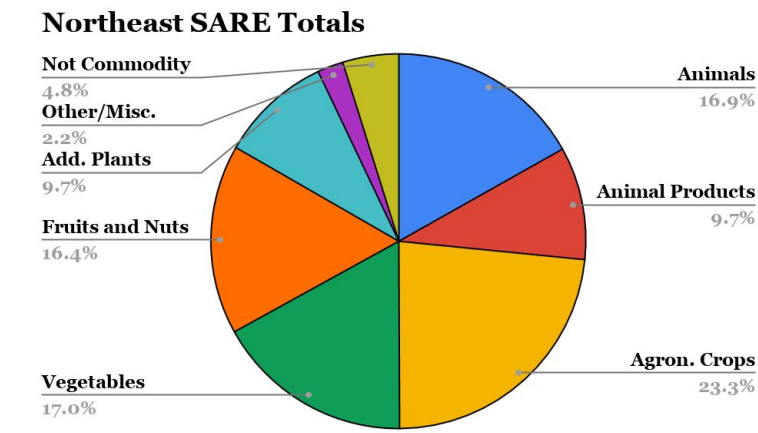
A side-by-side comparison of commodities produced in the region and addressed through Northeast SARE grants is helpful in examining the trends between commodities produced in the region and program funding priorities. It also shows the interest of grantees regarding certain commodities as compared to other producers in the region.

**Graph 7. Number of farms selling a commodity in the region (2017 Census of Ag).**

The top 3 commodities in the region according to the most recent census are agronomic crops, animals, and animal products. SARE grant project numbers mirror this, with agronomic crops and animals as top commodities addressed. However, the second largest amount of projects funded went to vegetable projects while only 6.3% of Northeast farms produce this commodity.



**Graph 8. Number of projects funded by Northeast SARE by commodity.**

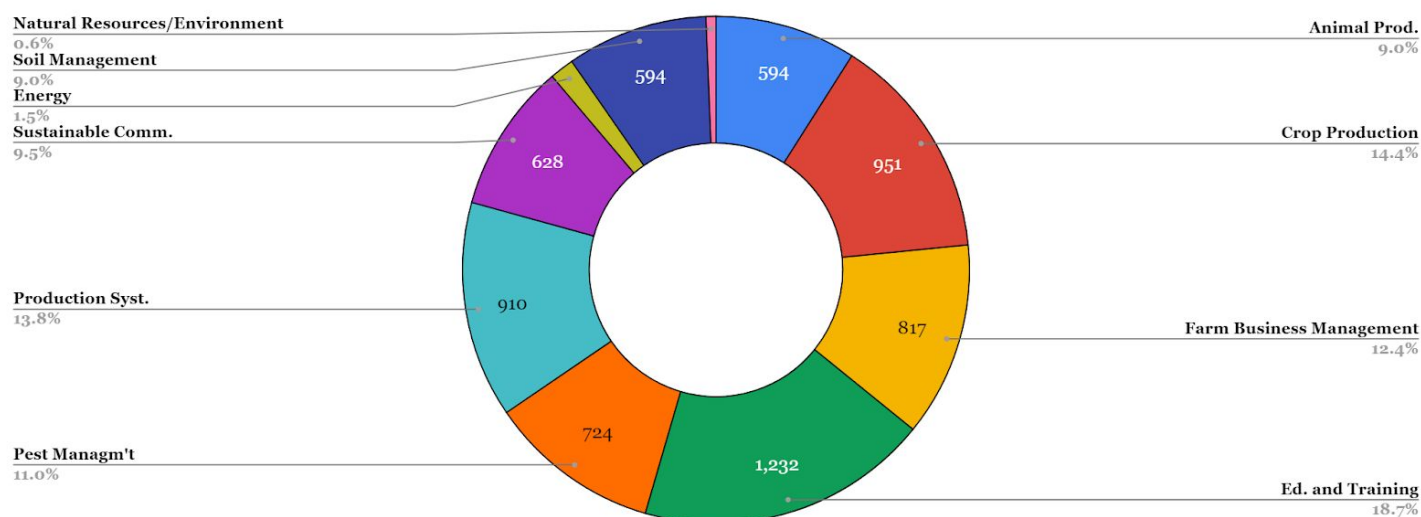


# Practices

In the national project database, grantees are able to select from 10 categories (animal production, crop production, education and training, energy, farm business management, natural resources/environment, pest management, production systems, soil management, and sustainable communities) and 250 sub-categories to describe practices their grant projects address. For the grant portfolio review, data for just the 10 top-level categories (listed above) have been analyzed.

Consideration of the frequency of these practices amongst grantees gives insight into which areas have been most addressed in the past. Some correlations can be seen between the frequency of certain commodities and the frequency of practices. For instance, “crop production” is one of the most common practices and “agronomic crops” are the most common commodities addressed. Similarly, “animal production” practices and animals/animal products are correlated in frequency of occurrence both regionally and amongst grantees. Despite practices like “energy” being only a small percentage of total practices, it has become increasingly common as a project focus since 2000, probably due to the increasing interest in alternative energy options over the past couple decades.

**Graph 9. Number of projects funded by Northeast SARE by practice.**



By examining the values and percentages displayed in the graph above, we can better see the practices that are most frequently addressed by grants over the lifetime of the program. The three most common practices are “education and training” (1,232 projects), “crop production” (951 projects), and “production systems” (910 projects). The least common practices thus far are “energy” (102 projects) and “natural resources/environment” (42 projects). When looking at the data, it should be noted that grantees self-select these categories. So, for example, in the case of “education and training” as a practice area, selection of that category may pertain more to the circumstance of education being a greater component of the project than research and/or the main intention of the project, thus making it a more commonly recorded practice. Note that education and outreach is required of all projects, and the selection of “education and training” as a self-selected practice category may be skewing the big picture here.

# Applicant Information

By looking at grant applicant data through demographic lenses, we can get a picture of who Northeast SARE is serving. This information may help us identify who is well represented within the program's grants portfolio and areas of growth for applicants in the future.

Northeast SARE has been gathering grant applicant demographic information--gender, race and ethnicity--for all grant programs the past four years (2016-2019). While these fields have been required responses in the online grant submission system (CIIDS), applicants may choose a "prefer not to answer" response; on average, there is a 14% "prefer not to answer" response rate across grant program demographic questions, ranging from 6% to 23% depending on the specific question and grant program. While it is important to maintain a "prefer not to answer" option, these responses muddy a solid understanding of applicant demographics. Therefore, for the most part, the "prefer not to answer" responses have been removed from the following data presentations.

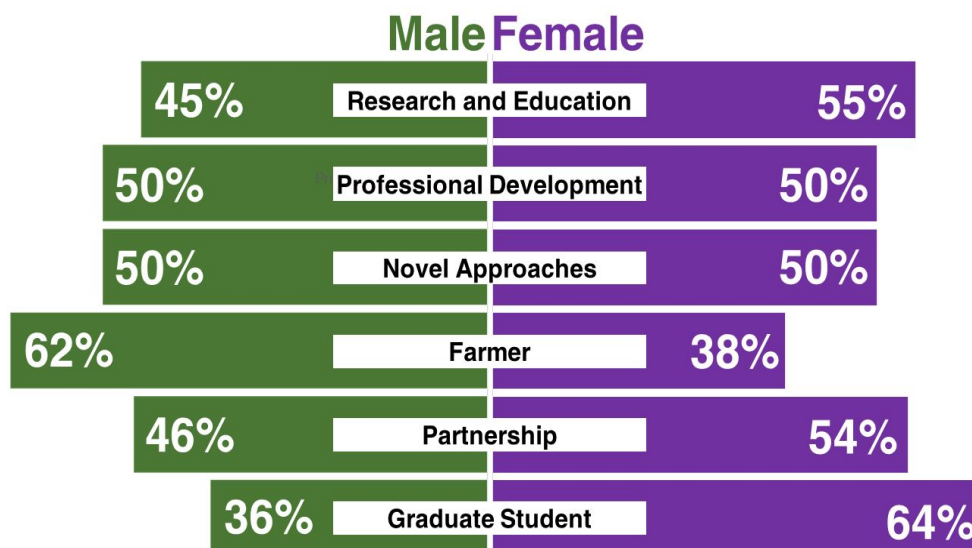
Further, only *applicant* data is presented below. While the national SARE reporting database / grants management system is able to collect demographic information about *grantees*, response rates are exceedingly low (less than 50% in several cases) and so it is difficult to accurately characterize grantee demographics at this time. As more data becomes available in the succeeding years, we anticipate an increase in grantee response rates regarding demographic data.

## Gender

Only data for binary gender categories--male and female--have been collected to date. Since this is a required field in the grant submission system, we have received a 100% response rate; applicants who prefer not to respond or who share other gender identities need to select the "prefer not to answer" response. As a 4-year average across all grant programs, it appears that women tend to submit more grant applications than men; an average of 52% of applicants are female, 48% are male. There has been a very slight increase in female applicants from 2016 to 2019.

In drilling down to specific grant programs, applicants of Northeast SARE's larger grant programs are pretty evenly split by gender. Applicants of the Partnership grant program are also fairly evenly split. The grant programs that show real differences in gender are the Graduate Student grant program; here twice as many applicants are women. Conversely, the Farmer grant program sees more significantly more male applicants.

**Graph 10. Percent applicants by binary gender for each grant program.**

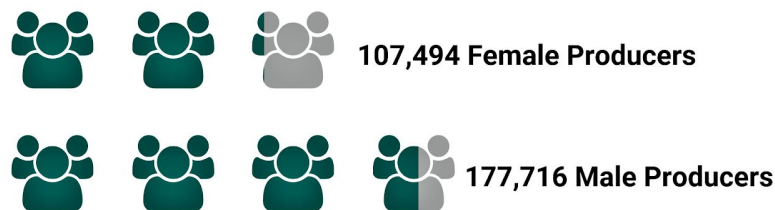


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## Gender of Farmer Grant Applicants

For the Farmer grant program, applicant demographic data can be compared to data from the US Census of Agriculture. By making these comparisons, we can better determine if the number of grant applicants (by gender) is proportional to the number of producers in the region.

**Graph 11. Gender of Producers in the Northeast (2017 Census of Agriculture).**



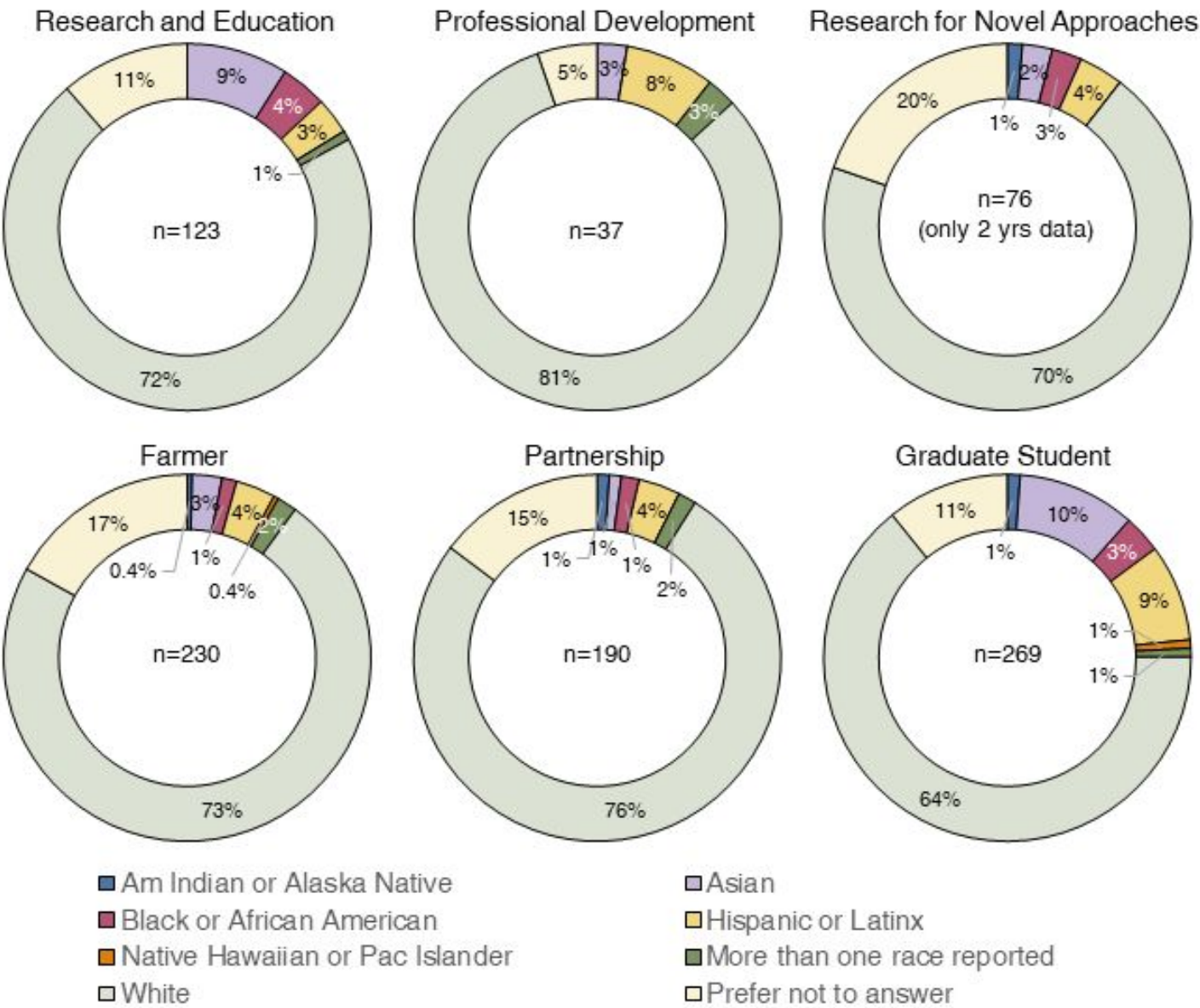
Comparing gender data from the 2017 Census of Agriculture and Farmer grant applicant data side-by-side, we are able to see that, on average, the distribution of applicants by gender matches producers within the region. The Census shows that in the Northeast, 62% of producers were male (177,716) while 38% of producers were female (107,494). These are the same proportions we see in Farmer grant applicants--62% male; 38% female.

# Race and Ethnicity

Northeast SARE has also been collecting data on applicants' race and ethnicity for the past 4 years. Again, applicants are welcome to select a "prefer not to answer" response. In the graph below, the "prefer not to answer" responses are included. Data for 2016 through 2019 have been aggregated (with the exception of the Research for Novel Approaches program; here applicant data for 2018 and 2019 are included).

The pie charts below show that applicants are mostly white, especially for the Professional Development and Partnership grant programs. The Graduate Student grant program has the most diversity in terms of race and ethnicity; in this program 64% of applicants were white and 25% were people of color.

**Graph 12. Percent of applicants by race and ethnicity for each grant program (2016-2019).**



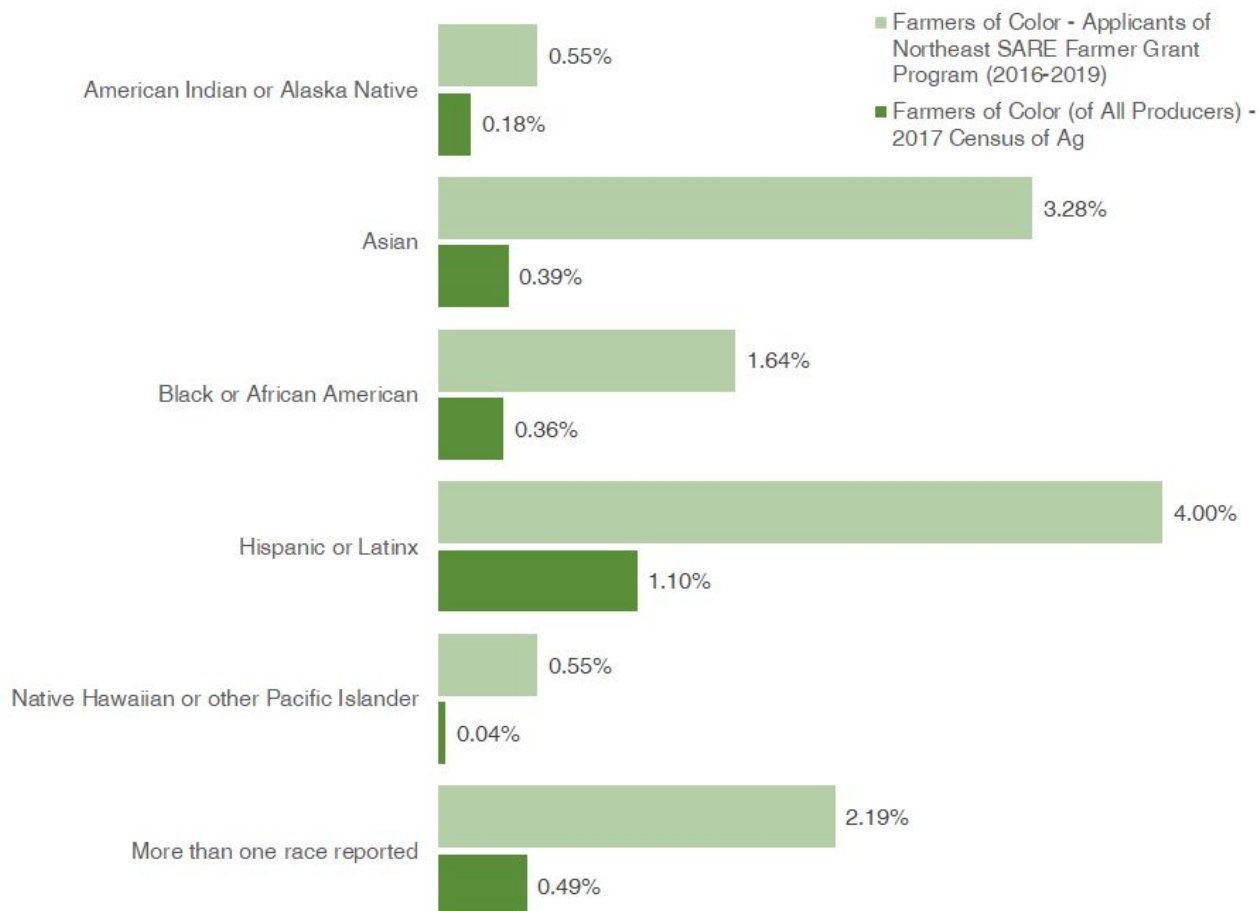
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## Race and Ethnicity of Farmer Grant Applicants

By examining race and ethnicity of both the total population of producers in the region and amongst Farmer grant applicants, we are better able to ascertain how well the grant program is serving the larger farmer population in Northeast.

The 2017 Census data show that the overwhelming majority of producers in the region are white (98.5% on average across the region). Northeast SARE's data shows that Farmer grant applicants are also primarily white (92% of applicants). Therefore, it was useful to remove white farmers from both data sets to focus on other races and ethnicities who make up a vastly smaller percentage of each group. Presented this way, we see that Farmer Grant applicants (according to 4 year totals from 2016 to 2019) tend to be ever so slightly more diverse (in terms of race and ethnicity) than producers in the region, based on the 2017 US Census of Agriculture.

**Graph 13. Farmers of Color -- Northeast SARE Farmer Grant applicants (2016 to 2019) as compared to 2017 Census of Agriculture producer data.**

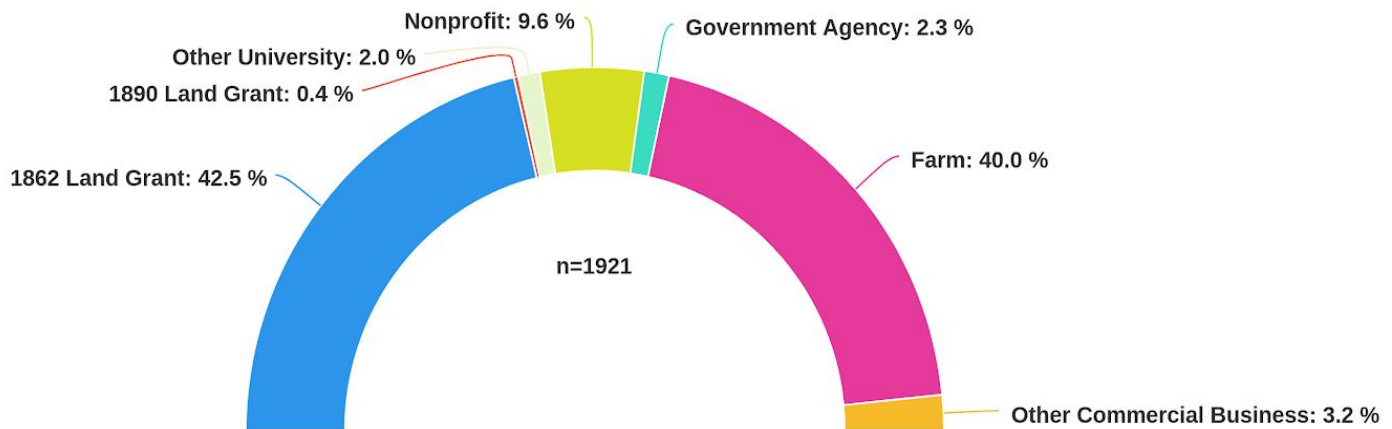


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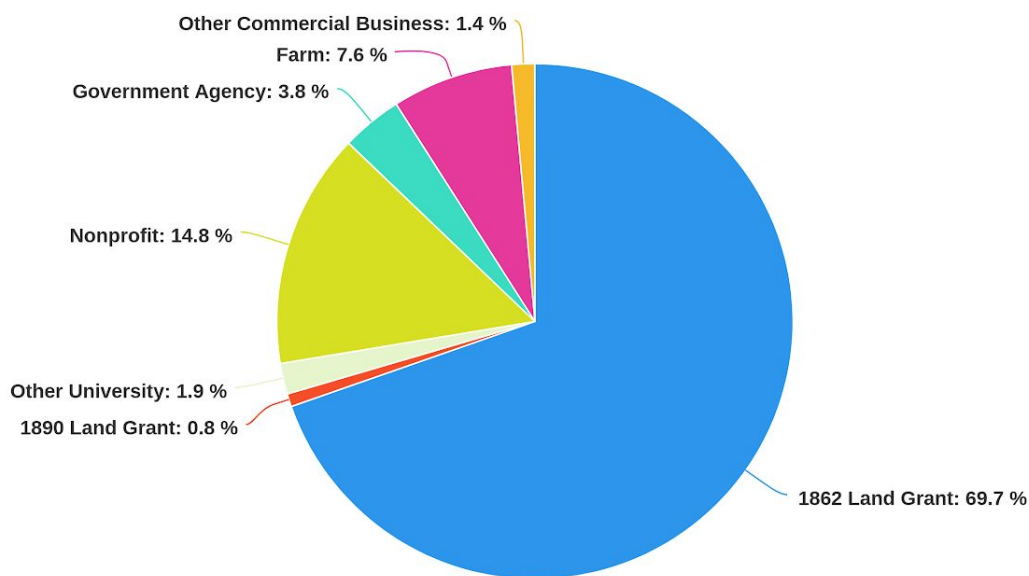
# Organization Type

Northeast SARE awards grants to a number of different types of organizations including the thirteen 1862 and three 1890 land grant universities, other universities and colleges, nonprofit organizations, farms and other commercial businesses, and government agencies. The distribution of grants amongst organization types provides helpful insight into where and to whom overall funding is going.

**Graph 14. Percent projects (number) funded by organization type.**



**Graph 15. Percent grant funding (\$) by organization type.**

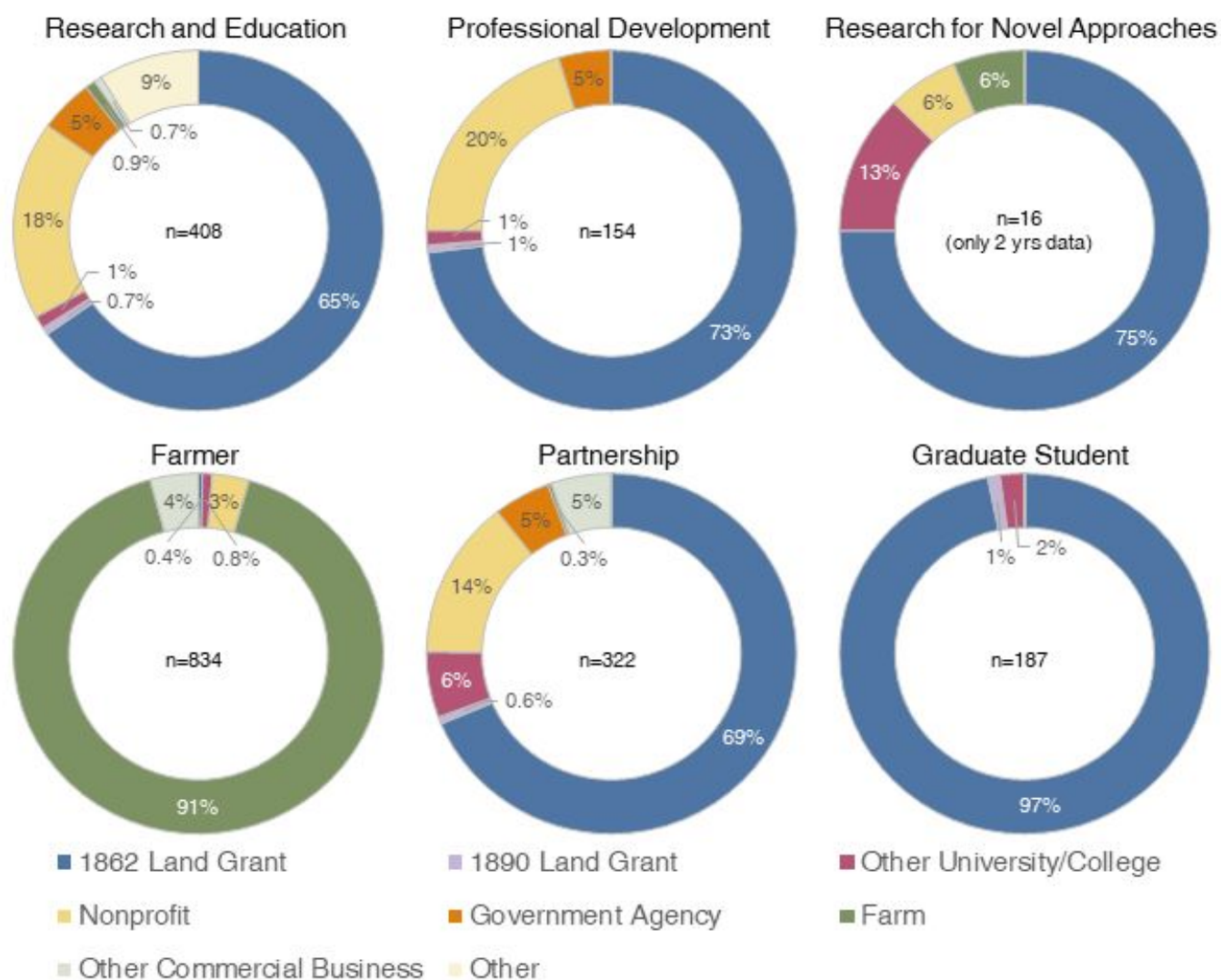


1862 land grant universities and farms are the organization types that have received the majority of grants; 82% of all Northeast SARE grants have gone to these organizations. 1890 land grant universities and other colleges and universities have received the fewest grants; less than 3% of Northeast SARE's total grants went to these organizations.

The percentage of funding awarded by organization type mostly correlates with the number of grants projects received. However, two areas do not follow this trend; 1862 land grant universities received 42.5% of all grant awards yet received 69.7% of total funds. This compares to farms that have received 40% of projects yet were awarded 7.6% of total funds. This discrepancy can be explained by the large percentage (72%) of Northeast SARE's larger grants--Research and Education, Professional Development and Research for Novel Approaches--awarded to the 1862s. More than a third of all grants have gone to farms but primarily through the Farmer Grant program that has a lower maximum award amount.

## Organization Types by Grant Program

**Graph 16. Percentage of grants to organization types by grant program (1988-2019).**

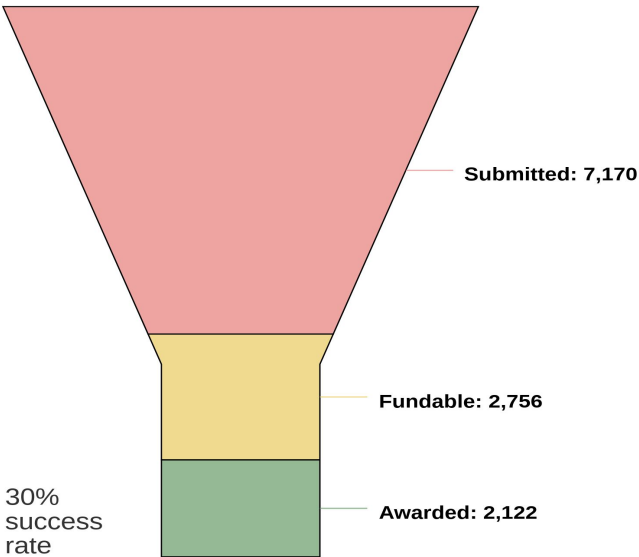


The pie charts above provide a picture of the proportion to which different organization types have received grants within each grant program. For example, not surprisingly, farms have received the majority of Farmer grants and 1862 land grants have received the majority of Graduate Student grants. The Partnership and Research and Education grant programs are the most diverse in terms of types of organizations receiving Northeast SARE grants.

# Proposal Success Rates

Over its 31 year lifetime, Northeast SARE has received 7,170 total proposals to all of its grant programs and has awarded 2,122 total projects, with an overall program-wide proposal-to-award success rate of 30%.

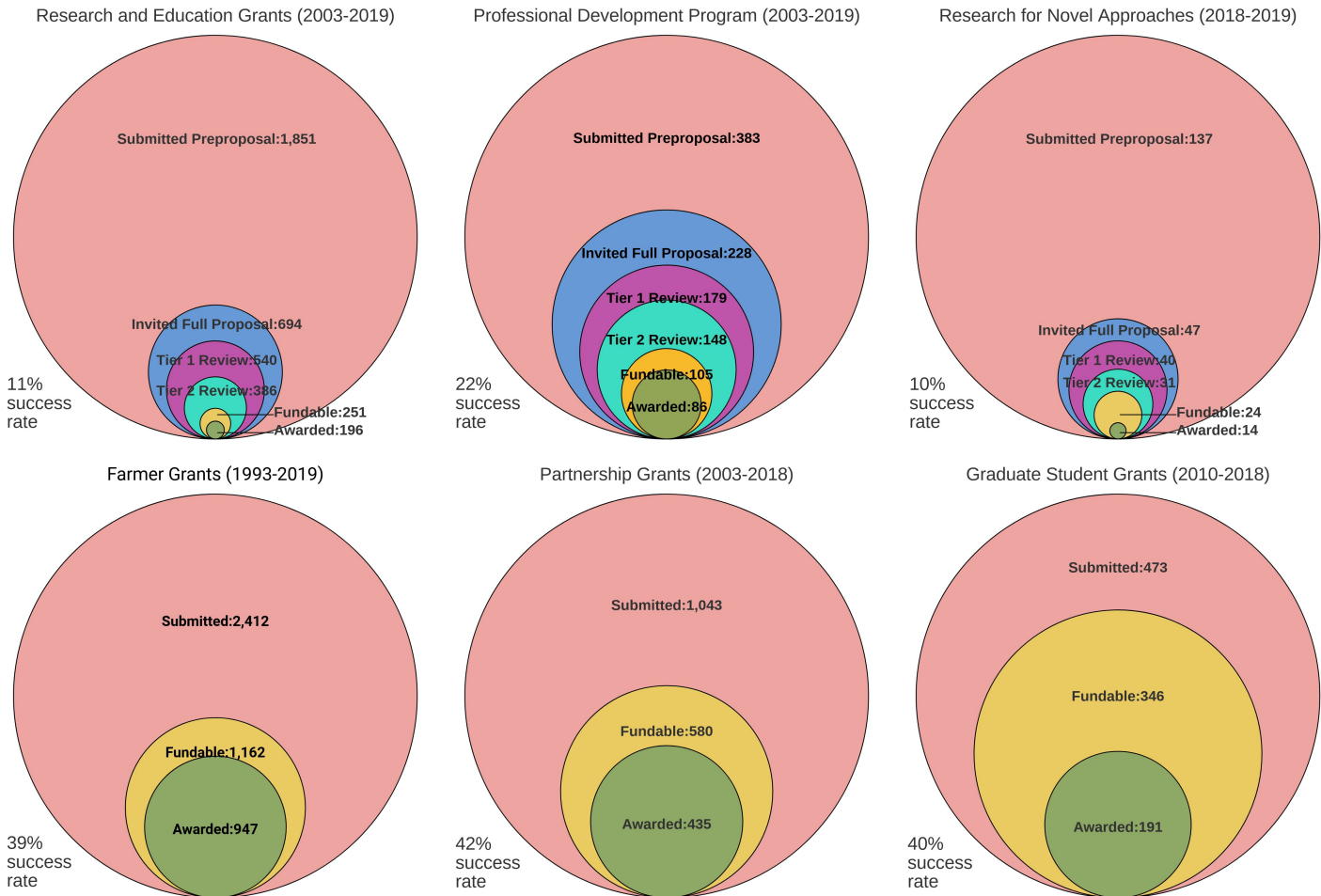
Graph 17. Total proposals submitted, deemed fundable and awarded (program lifetime).



## By Grant Program

The proposal-to-award success rate varies by grant program; for example, the Research for Novel Approaches grant program currently has the lowest proposal-to-award success rate at 10% while the Partnership grant program has the highest proposal-to-award success rate at 42%.

Graph 18. Proposal-to-award success rate stacked bubble charts for each grant program.

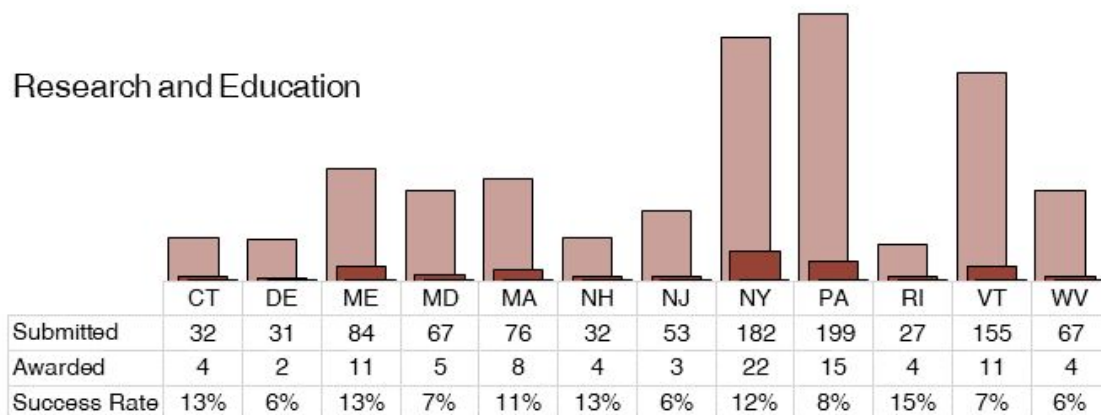


## By State

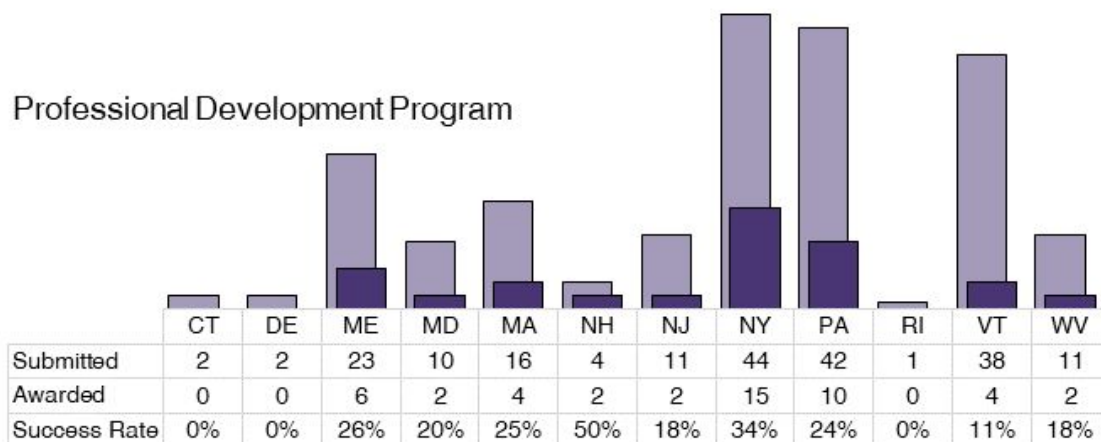
By considering proposal-to-award rates on a state-by-state basis, we are able to examine which states are seeing the greatest successes within the different grant programs. Success rates for each state vary between programs as is seen with West Virginia, for example, which saw the highest rate of success with Partnership grants (79%) but had the lowest success rates with Farmer grants (32%) and the Research and Education grants (20%). This analysis also allows for comparison of applicant success across all states for each program.

**Graph 19. Applicant proposal-to-award success rates by state for each grant program.**

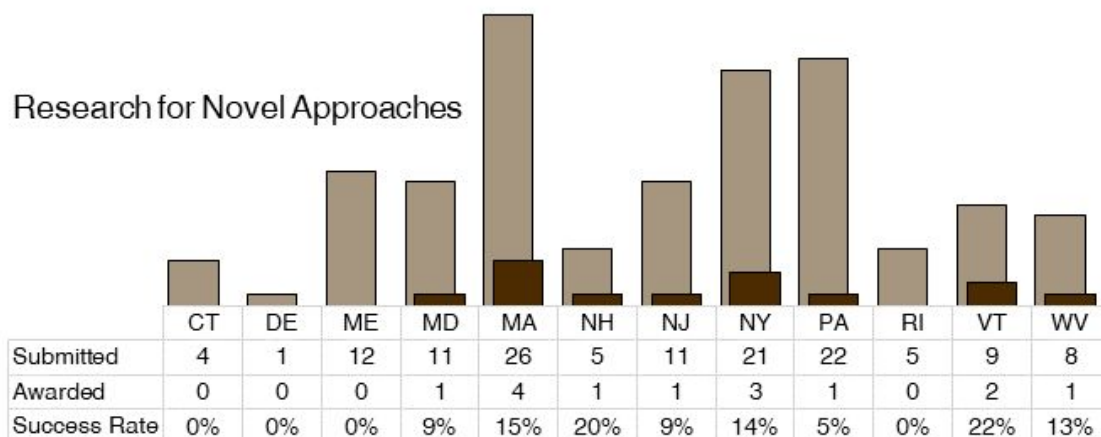
### Research and Education



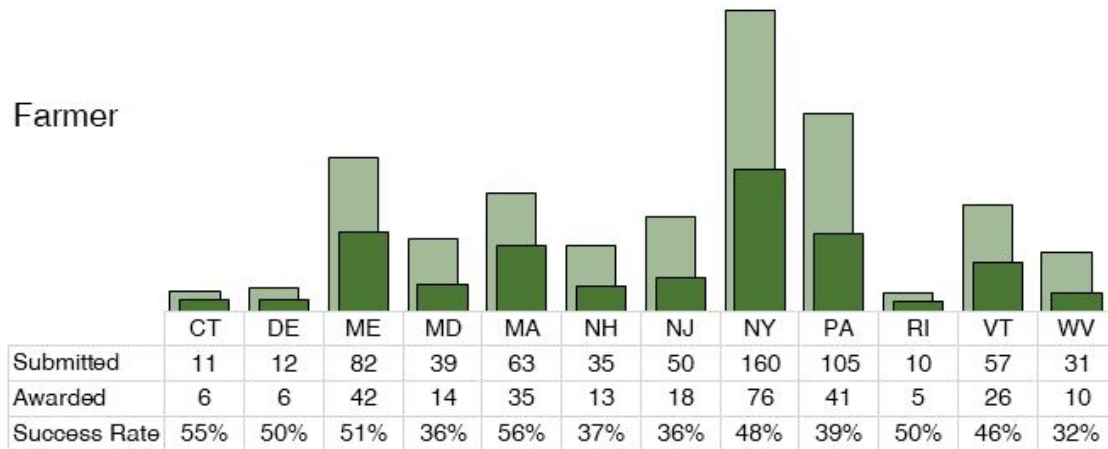
### Professional Development Program



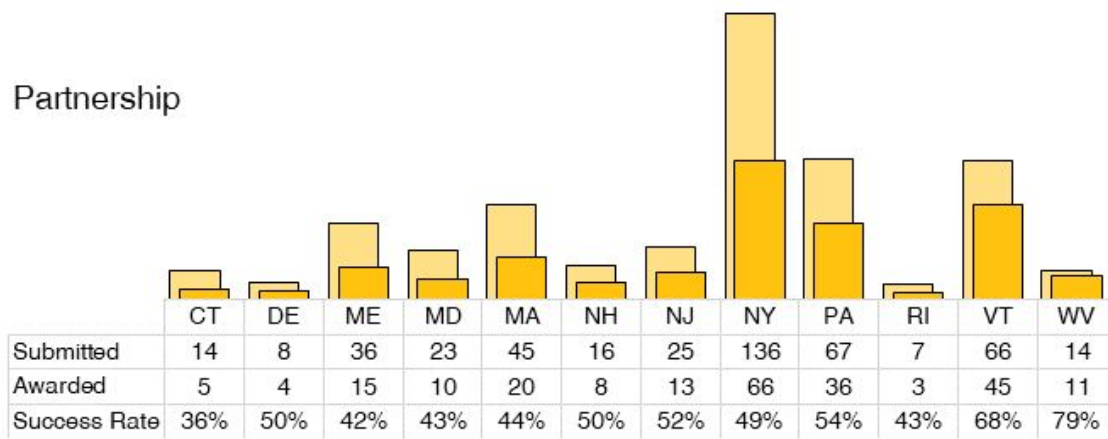
### Research for Novel Approaches



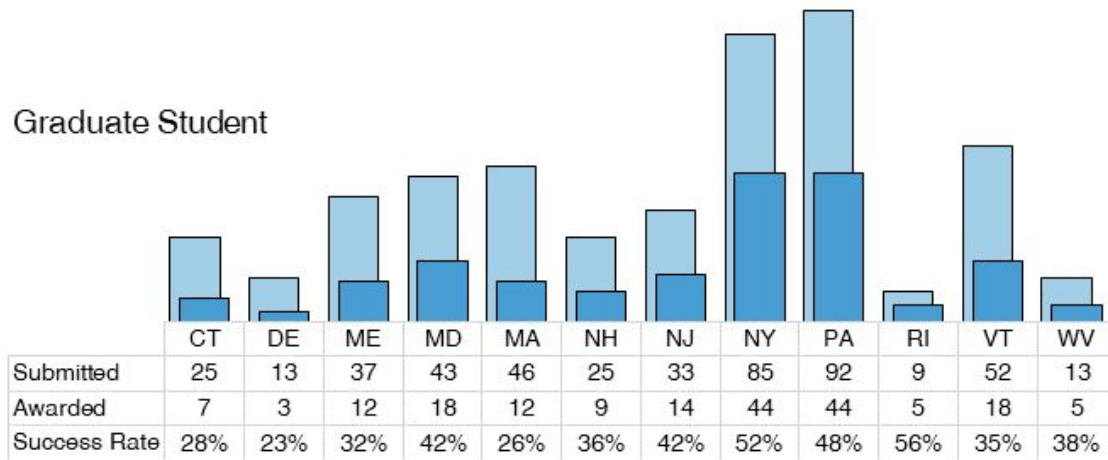
## Farmer



## Partnership

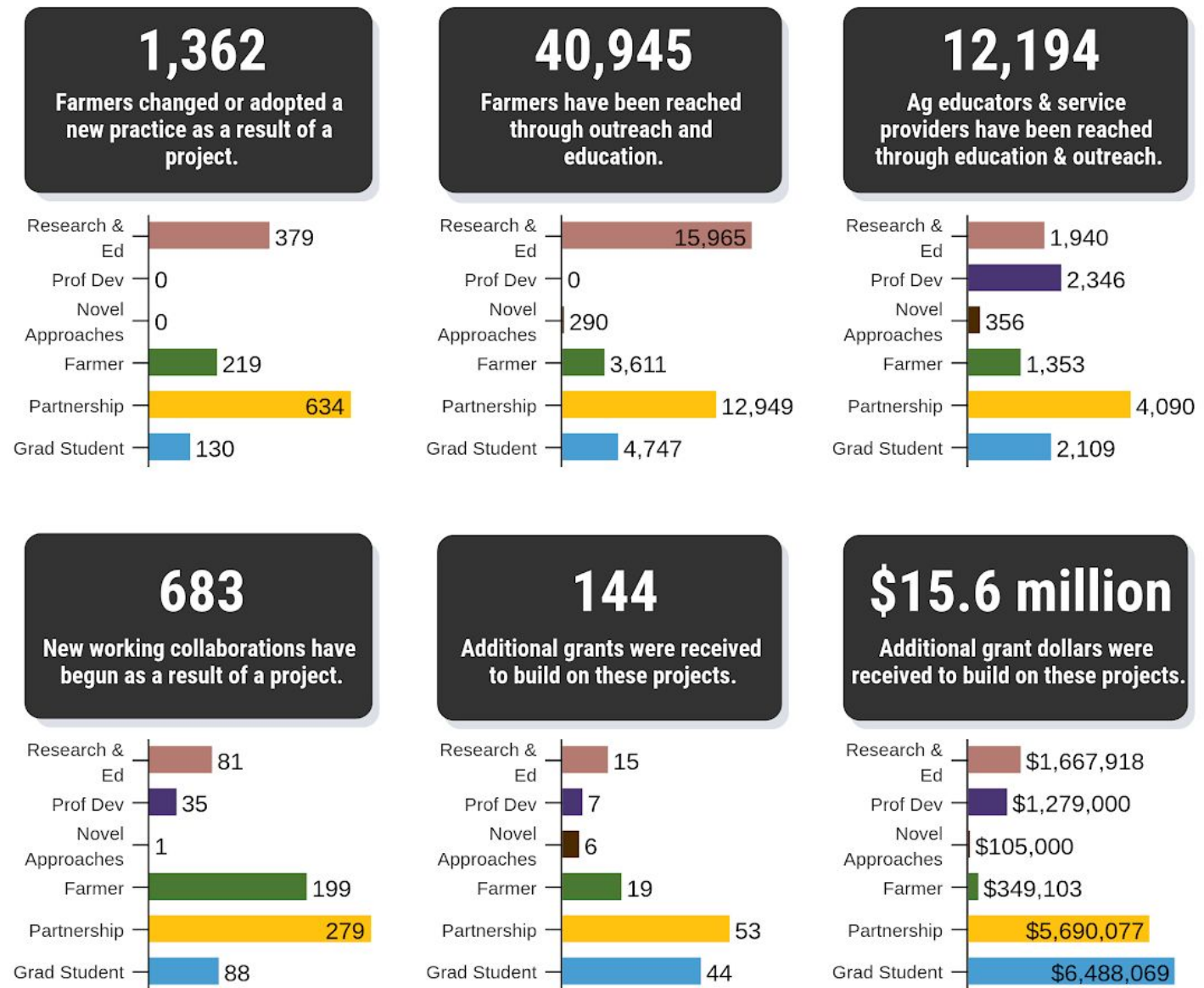


## Graduate Student



# Program Impacts

Impacts from 430 projects conducted from 2014 to 2018 have been aggregated and presented below.



In total, these projects conducted 4,474 consultations, 550 workshops and field days, 535 on-farm demonstrations, 331 tours, 186 online trainings, 1,204 webinars and in-person presentations, and 239 other educational activities. They published 415 press articles and newsletters and 67 journal articles, and developed 474 curricula, factsheets and educational tools. 2,442 farmers participated in the research conducted by these projects.