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Overview of the USDA VAPG Program From 2001 to 2017

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Overview of the USDA VAPG Program From 2001 to 2017

Background Information

The U.S. Department of Agriculture (USDA) Value Added Producer Grant (VAPG) Program began in 2001. Further authorizations and appropriations for the program were provided and approved by Congress in each subsequent Farm Bill. Three graduate students have studied the program in three unique time periods to evaluate its success (2001 to 2005; 2001 to 2012; 2001 to 2017). Each study used existing data collected from the USDA and, in particular, the National Agricultural Statistics Service and Rural Development offices, to look at pertinent trends in the VAPG program over time. These data were supplemented by an additional intensive data-gathering process involving electronic and personal interviews and any other information that could be found to justify grant recipient progress in the stages of business development.

Research Objective

The three studies utilized these sets of data to classify each VAPG as one of the nine steps of business development: (1) creation of an idea, (2) formation of the idea into written form, (3) formation of an organizational structure for the idea, (4) hiring of employee(s) for the idea, (5) conducting an equity drive to raise capital for the idea, (6) formation of a physical structure for the idea, (7) creation of the idea into a product or service, (8) creation of the idea into a distributable product or service, and (9) selling the product or service within two years after receiving the grant. The studies analyzed what factors appeared to contribute to grant recipients' achievement of a higher stage of business development.

What overall trends were discovered over time?

The original study which analyzed the VAPG program from 2001 to 2005 (Boland, Crespi, and Oswald 2009) found that market share is likely an important determinant of recipients' success. Greater sales, higher grant amounts, and having a lower number of producers were also estimated to partially determine achievement of the last step of business development. Producer groups such as trade associations composed of producers or cooperatives had a lower estimated probability of seeing their product or service come to fruition. Many of these activities were market studies, so this result may not be surprising. Finally, grant recipients who worked with dairy, flower, fruit, nuts, specialty meats, wheat, or wine commodities were estimated to be more likely to develop successful products or services.

The second study completed by Schenheit (2013) used data from 2001 to 2011, six years of data more than the first study. Some overall observations were that 1) the proportion of grants from 2001 to 2011 which were associated with the last step in business development (selling the product or service) was significantly greater than the proportion of these grants prior to 2006, with over half of the recipients achieving that step, 2) the geographic diversity of grants by state and territory was much broader after 2005, which likely reflects individual state efforts and USDA efforts to promote the program nationally, 3) the number of grants in the differentiation category increased significantly, 4) recipients who were already producing a value-added product and were looking to extend their product line or mix rather than starting "from scratch" achieved greater success, and (5) the number of Independent Producer recipients greatly increased. Far fewer agricultural producer groups which were composed of producers or cooperatives, such as trade associations, submitted grants.

The most recent study of the VAPG program completed by Blevins (2018) used data from 2001 to 2016, five years of data more than the second study and eleven more than the first. This analysis supported the findings of the first two studies, concluding that the size of a recipient's grant, the primary underlying commodity, the organizational form of the recipient, and the recipient's value-added activity all impacted the probability of recipients selling their product or service within two years of receiving a grant. Additional overall takeaways from this study were the following: (1) Whether or not a recipient had received a VAPG in a prior year impacted the probability of achieving step nine of business development, and (2) the proportion of grant recipients who achieved the final stage of business development increased significantly in comparison to the proportion of recipients in the first two studies.

All three studies found that the dollar amount of the grant significantly influenced VAPG recipients' achievement of step nine of the nine-step business process. In addition, recipients working with dairy, fruits and nuts, small grains, wheat, and wine commodities were estimated to have a higher probability of success. Classification of the grant as the newest class of VAPG program allotments – Mid-Tier Value Chains – was positively and significantly associated with recipients' achievement of the ninth step, although it should be noted that the number of Mid-Tier grants has been small.

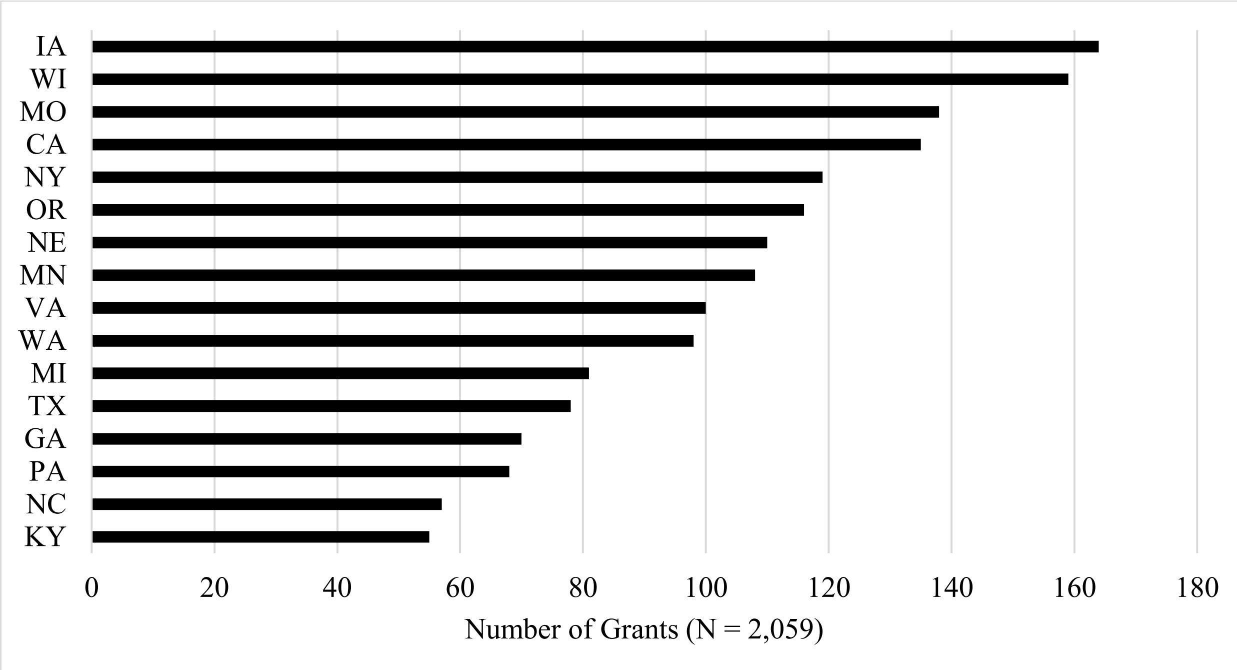
Descriptive Trends in the USDA VAPG Program From 2001 to 2017

Exhibits 1 to 9 (adopted from Blevins (2018)) illustrate overall program trends and statistics from 2001 to 2016. As mentioned previously, data was collected from the USDA and, in particular, the National Agricultural Statistics Service and Rural Development offices, and were supplemented by electronic and personal interviews and any other information that could be found to justify grant recipient progress in the stages of business development.

Exhibit 1 shows the top sixteen states by VAPG grant frequency since 2001. These sixteen states contain nearly seventy percent of all grant recipients.

The data categorizes grant recipients by both organizational form and the value-added activity the grant will be supporting. These categories are based on language in the Farm Bill, and applicants are required to identify their form and activity within the grant application (Boland, Crespi, and Oswald 2009). The four organizational types have not changed over time and include Independent Producers (*INDEPEND*), Agricultural Producer Groups (*APGROUP*), Farmer and Rancher Cooperatives (*FARMER*), and Majority-Controlled Producer-Based Businesses (*MAJCON*). *APGROUP* are trade associations composed of producers or cooperatives.

Exhibit 1. Number of Grants Received from 2001 to 2016, Top 16 States



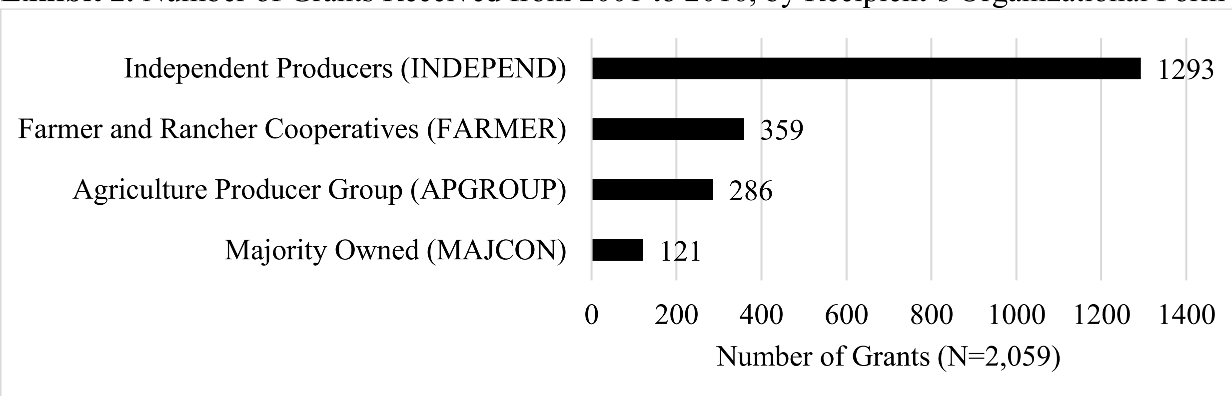
The New Mexico Wine Growers Association, which received a $125,000 grant in 2015 to help the organization market its members' products, is an example of an *APGROUP*. *FARMER* is defined as a cooperative composed entirely of farmers and ranchers. Gullah Farmers' Cooperative, which received $195,000 in 2016 to process and market chopped collard greens, cabbage and broccoli to school districts in South Carolina, is an example of this organizational form. *INDEPEND* is defined as a steering committee composed entirely of independent producers. An example of this organizational form is Farming Fungi, LLC in Maine, which received close to $50,000 in 2014 to market organic mushrooms in unique, compostable packaging for resale in local grocery store chains and food distribution companies. Farming Fungi believed that their grant would increase sales by one thousand pounds per week while saving six jobs and creating two additional jobs. Finally, *MAJCON* represents entities with less than one hundred percent farmer and rancher ownership. Minto Islands Growers, LLC, which used its $12,000 grant from 2012 to process and package loose leaf tea leaves from the Camellia sinensis tea plant, exemplifies this organizational form.

Exhibit 2 shows the distribution of total grants awarded by the VAPG program by organizational form: independent producers, farmer and rancher cooperatives, agriculture producer groups, and majority-owned operations.

Independent producer recipients accounted for only eight percent of all grants in 2001, but their share climbed steadily through 2006 when they reached seventy percent of grants received in that year. That increase has been sustained – from 2007 to 2017, independent producers have never been awarded less than sixty-five percent of grants in any given year. As a result, independent producers have received the largest share of all grants (sixty-two percent) since the VAPG program's inception. On the other hand, farmer and rancher cooperatives and agriculture producer groups have experienced the opposite trend. The share of grants awarded to cooperatives and agriculture producer groups peaked in 2001 (almost fifty percent) and 2002 (forty-six percent), respectively. These shares of annual grants awarded declined for both organizational forms until 2012. Since 2012, neither organizational type has received more than ten percent of the total grants in a given year.

Since the share of independent producers receiving grants has increased over the life of the VAPG program, it is likely that (1) higher levels of success for recipients attaining the final step in business development over time and (2) an increasing proportion of recipients exhibiting marketing and sales strategies for their products will both be observed.

Exhibit 2. Number of Grants Received from 2001 to 2016, by Recipient's Organizational Form



As mentioned previously, data on VAPG recipients also categorize recipients by value added activity. According to Boland, Crespi, and Oswald (2009), Congress initially defined four different types of value-added classifications: differentiation (*DIFF*), farm- or ranch-based renewable energy (*RENEW*), product segregation (*SEG*), and processing (*PROCESS*). *DIFF* is defined as differentiated production or marketing, as demonstrated in the business plan of the organization. An example of a *DIFF* recipient is Ocean Spray Cranberries, Inc. located in Maine, which received a $250,000 grant in 2016 to assist with marketing a new line of beverages made from whole milled cranberries ("Whole Berry"). *RENEW* (formerly classified as *ENERGY*) is defined as the economic benefit realized from the production of farm- or ranch-based renewable energy. In 2016, Woodland Improvements, LLC received a $250,000 *RENEW* grant to help the Maine-based company create a wood chip product that could be burned in a boiler as renewable energy.

SEG is defined as product segregation, such as an identity preservation system for a particular variety of grain or traceability of hormone-free livestock (Rupasingha, Pender, and Wiggins 2018). Thompson Farms Country Cured Meats, LLC is an example of a *SEG* grant recipient. Based in Georgia, Thompson Farms was awarded a $250,000 grant to help cover costs associated with new non-GMO-raised pork. *PROCESS* (formerly classified as value-added production) is defined as a change in the physical state of the product. In 2015, Champlain Valley Farm in Vermont received a $250,000 *PROCESS* grant to pay for fees associated with processing pork into value-added products, including sausages and bacon.

According to Schenheit (2013), the VAPG program was later expanded to include two additional value-added activities: locally-grown (*LOCAL*) and mid-tier value chains (*MTVC*). *LOCAL* includes products that are grown and marketed as locally-grown. Millitello Farms, LLC, located in New York, received a $41,000 grant in 2016 to expand promotion and sales of locally grown grapes, pumpkins, gourds and apples. *MTVC*s are defined as at least two alliances, linkages or partnerships within the value chain that link independent producers with businesses and cooperatives. These partnerships must market value-added agricultural products in a manner that benefits small- or medium-sized farms that are structured as family farms, including the names of the parties and the nature of their collaboration (Schenheit 2013). An example of an *MTVC* grant recipient is the Texas Grassfed Association, which received a $240,000 grant in 2015 to support the expansion of Hidden Oaks' (a mid-tier value chain) marketing capability.

Exhibit 3 shows the distribution of grants by value-added activity from 2001 to 2016. Differentiated production or marketing (*DIFF*) encompasses the widest range of activities and represents nearly sixty-five percent of all grants in the dataset, supporting the hypothesis (as in Exhibit 2) that there are likely to be higher levels of success for recipients attaining step nine of business development over time and that an increasing proportion of recipients will exhibit marketing and sales strategies for their products.

Exhibit 3. Number of Grants Received from 2001 to 2016, by Value-Added Activity

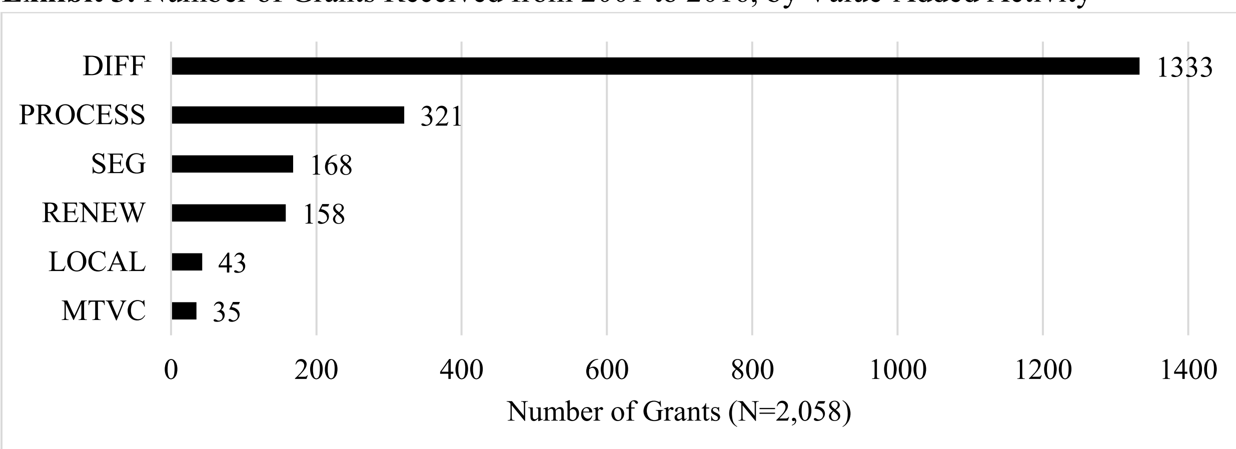


Exhibit 4 denotes the share of total grants associated with each underlying commodity used by VAPG recipients. Dairy products, wine/liquor products, and fruit and nut products represent the three largest shares of commodities associated with grant awards and together equal forty percent of all awards. This observation is interesting in two distinct ways: (1) As mentioned previously, recipients engaged in production of commodities in these three areas were more likely to reach step nine of business development (marketing and sale of products), and (2) wine/liquor production is largely associated with independent producers. Therefore, Exhibit 4 provides additional evidence that both (1) higher levels of success for recipients attaining the final step in business development over time and (2) an increasing proportion of recipients exhibiting marketing and sales strategies for their products, particularly independent producers, will be observed.

Exhibit 4. VAPG Frequency, by Commodity

CROP	Frequency	Percent	CROP	Frequency	Percent
DAIRY	301	15.2%	*POULTRY*	42	2.1%
WINELIQUOR	265	13.4%	*WHEAT*	38	1.9%
FRUITNUTS	236	11.9%	*WIND ENERGY*	35	1.8%
VEGETABLES	215	10.8%	*BIO*	34	1.7%
BEEF	175	8.8%	*AQUA*	33	1.7%
CORN	160	8.1%	*FLOWER*	26	1.3%
OTHER	106	5.4%	*SUGAR*	14	0.7%
SOYBEAN	82	4.1%	*EBEAN*	8	0.4%
SGRAIN	58	2.9%	**Total**	**1,983**	
FORESTRY	54	2.7%			
PORK	53	2.7%			
SMEAT	48	2.4%			

How successful were VAPG recipients?

An idea is considered to be at stage nine (commercialized) if the resulting product or service is sold twenty-four months after the grant was awarded. Exhibit 5 shows the frequency of grant recipients' achievement of each of the nine stages in business development. As was the case in the subsets of data used by Boland, Crespi, and Oswald (2009) and Schenheit (2013), stages three and nine were achieved most frequently between 2001 and 2016. This result is observed because in order to move beyond stage three, a producer must exit the idea creation phase and enter the investment-heavy commercialization phase comprised of stages four to eight. The data show that a large proportion (24%) of recipients stop at stage three, likely due to higher risk and cost associated with business development beyond stage three.

Exhibit 5. Frequency of Achievement of the Business Development Stages by Grant Recipients

Step	Description	Frequency
1	Creation of idea	8
2	Formation of idea into written form	53
3	Formation of an organizational structure for idea	486
4	Hiring of employee(s) for the idea	7
5	Conducting equity drive to raise capital for idea	17
6	Formation of physical structure for the idea	36
7	Creation of the idea into a product or service	16
8	Creation of the idea into a distributable product or service	12
9	Product or service is sold	1423
	Total number of grant recipients	**2,058**

From 2001 to 2005, fifty-one percent of VAPG recipients reached stage nine. The percentage of recipients reaching stage nine has increased significantly since then – in this dataset, sixty-nine percent of all recipients successfully achieved stage nine (full commercialization). One possible explanation for this increase is that as public knowledge of the VAPG program expanded and greater resources from the USDA and at the state level consequently became available, recipients were better prepared to develop their operations over time. Similarly, the pool of grant applicants may have grown in step as the program became more well known, allowing the USDA to choose more competitive applicants. While these theories or similar reasoning may help explain the large jump in successful recipients between 2006 and 2011, it is not consistent with a return to more modest numbers of recipients who reached stage nine after 2011.

Exhibit 6 displays the percent of recipients who achieved stages three and nine by year. It is clear that the period 2006 – 2011 was characterized by inordinately high rates of success among VAPG recipients. The explanation for this phenomenon is unknown, and the data do not provide evidence of any structural changes that may have occurred during those years.

Exhibit 6. Percentage of VAPG Recipients Achieving Stage 3 and Stage 9, by Year

Year	Stage 3	Stage 9
2001	33%	50%
2002	45%	48%
2003	30%	58%
2004	55%	41%
2005	37%	55%
2006	1%	97%
2007	5%	91%
2008	0%	93%
2009	2%	93%
2011	0%	98%
2012	5%	63%
2014	27%	70%
2015	33%	66%
2016	23%	68%

Exhibit 7 shows the distribution of grants by organizational form from 2001 to 2016. *INDEPEND* had the highest percentage of recipients who reached stage nine of business development, while *APGROUP* contained the highest percentage of recipients who reached stage three.

Exhibit 7. Percentage of VAPG Recipients Achieving Stage 3 and Stage 9, by Organizational Form

	Stage 3		Stage 9	
Org Type	Frequency	Percent	Frequency	Percent
APGROUP	126	44.06%	137	47.90%
FARMER	77	21.45%	248	69.08%
INDEPEND	246	19.04%	969	75.00%
MAJCON	37	30.58%	69	57.02%
Total	**486**	**23.62%**	**1423**	**69.14%**

Exhibit 8 presents the overall distribution of grants across value-added activities. The category *DIFF* encompasses the widest range of activities and represents nearly sixty-five percent of all grants in the dataset. Only three percent of recipients were awarded *MTVC* grants, which reflects the fact that these grants are the most difficult to qualify for among all six categories.

Exhibit 8. VAPG Recipients by Type of Activity

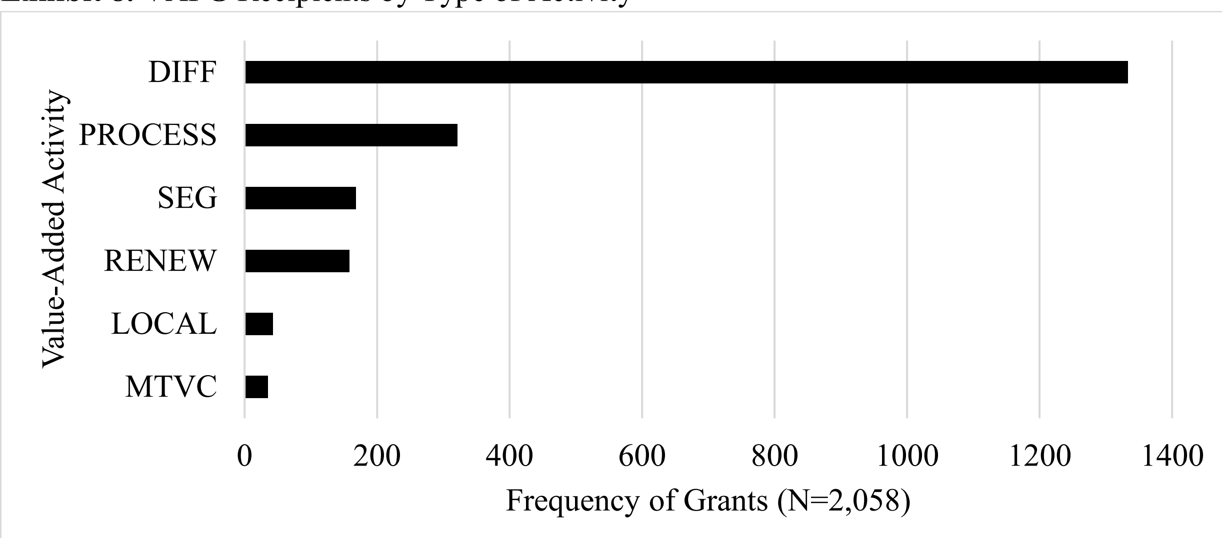


Exhibit 9 illustrates how the distribution of grants across value-added activities has evolved over the life of the program. Notably, the number of *RENEW* grants has flat-lined since 2009, while the number of *PROCESS, LOCAL* and *SEG* grants have increased. As noted, *MTVC* and *LOCAL* were not initially included as categories of value-added activities. Therefore, these grant classifications do not appear until 2006.

Exhibit 9. Frequency of VAPG Recipients, by Value-Added Activity

Activity	2001	2002	2003	2004	2005	2006	2007	2008	2009	2011	2012	2014	2015	2016	Total
DIFF	25	105	81	62	76	64	49	59	73	127	39	199	166	208	**1333**
RENEW	11	36	30	11	24	18	4	14	3	3	0	0	1	3	**158**
SEG	11	34	21	8	16	5	2	3	1	1	25	13	6	22	**168**
PROCESS	13	25	17	6	9	0	10	1	11	26	30	29	70	74	**321**
LOCAL	0	0	0	0	0	0	0	0	0	0	12	3	13	15	**43**
MTVC	0	0	0	0	0	2	1	3	8	10	4	2	2	3	**35**

The Online Presence and Marketing Strategies of VAPG Recipients in 2019

How do VAPG recipients market their products in 2019?

Up until this point, this article has focused on pertinent statistics and trends of the VAPG program over time, which were evaluated using existing data collected from the USDA and the National Agricultural Statistics Service and Rural Development offices, as well as electronic and personal interviews and other available information. The remainder of the article summarizes an additional data-gathering process and data analysis utilizing digital data available on the internet, which characterizes how grant recipients market their products.

In 2018 and 2019, a detailed analysis employed digital techniques to search for online information for each unique grant recipient from 2001 to 2016. Based on what was discovered, existing conclusions about business development trends of VAPG recipients were supplemented with web-based descriptive evidence. To gather data on grant recipients, the VAPG recipient name (and occasionally other search terms) was search-queried in Google using a complete existing database of recipients. This scraping of internet data collected binary yes/no variables from the web search, which included the following: existence of website, Facebook, Twitter, Instagram, Pinterest, LinkedIn, Youtube, phone number, address, or email. If the web search confirmed a valid online presence of the recipient, additional binary yes/no variables collected were the following: online sales, local retail sales, employment advertisement, and company history page. Lastly, information on the number of employees was collected by utilizing Manta Media directory information (if available) or, less commonly, observing the number of employees on recipients' websites. [2]

As described earlier in the article, VAPG program funding for individual producers has increased over time from 2001 to 2016 in lieu of funding for producer groups/cooperatives, implying that higher levels of success for recipients attaining the final step in business development over time are likely to be observed, and that an increasing proportion of recipients exhibiting marketing and sales strategies for their products are also likely to be observed. Evidence of these trends was found in the online presence of all VAPG grant recipients in August 2019.

First, it is increasingly likely that grant recipients have a website if the year of their latest grant is more recent. Secondly, grant recipients with a website have fewer employees if their latest grant was after 2010 compared to grant recipients with a website whose latest grants were before 2010, when more recipients were farmer and rancher cooperatives or agriculture producer groups. Finally, it is increasingly likely that grant recipients sell their products online and/or from local retailers/distributors if the year of their latest grant was more recent.

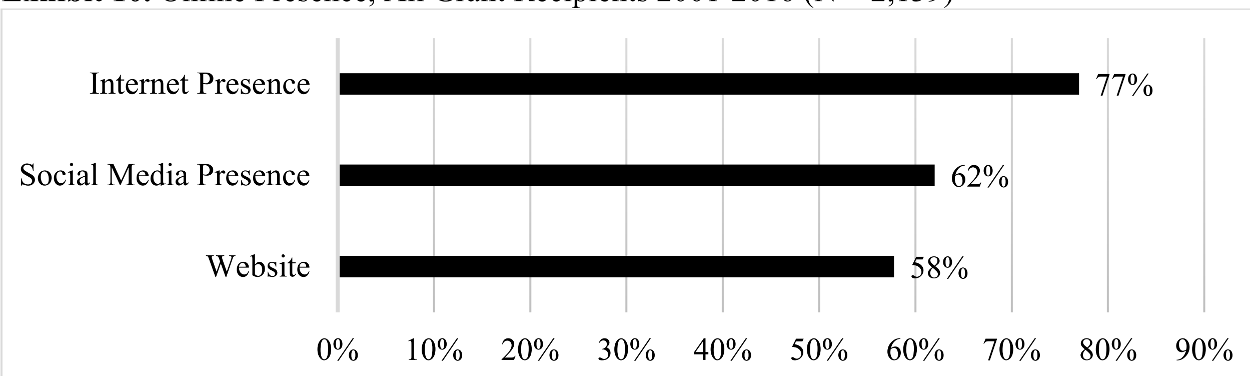
Digital data describing the general online presence for VAPG grant recipients who received grants from 2001 to 2016 were collected. Exhibits 10 and 11 depict the overall forms in which grant recipients can be found online in August 2019, Exhibits 12 and 13 describe specific online channels through which grant recipients offer communication and engagement, Exhibits 14 and 15 summarize online employment information, and Exhibits 16 and 17 display information on how grant recipients sell their products externally. Figures with 2,139 observations use data on all recipients regardless of whether they have an online presence, figures with 1,647 observations

[2] Example for Calcot, Ltd.: https://www.manta.com/c/mmjn3zq/calcot-limited

only use data on recipients who have some type of online presence to summarize the characteristics of the recipients' presence. Figures with 1,237 observations only use data on recipients who have a website in August 2019 to summarize the characteristics of how websites are utilized by recipients.

Exhibit 10 indicates that of all grant recipients from 2001 to 2016, seventy-seven percent have an internet presence in August 2019, which includes any of the following: website, social media, address, phone number, or email. Sixty-two percent of all grant recipients are on some type of social media, and fifty-eight percent of recipients have a website.

Exhibit 10. Online Presence, All Grant Recipients 2001-2016 (N = 2,139)



When looking at all grant recipients from 2001 to 2016 broken down by the latest year in which they received their respective grant(s) (Exhibit 11), it is clear that recipients who received their latest grant more recently are more likely to have an internet presence and a website in August 2019. For example, of the recipients who received their latest grant in 2003, about two-thirds have some type of internet presence and less than half have a website. In comparison, of the recipients who received their latest grant in 2014, almost ninety percent have some type of internet presence and about seventy percent have a website. Since it is increasingly likely that grant recipients have a website if the year of their latest grant is more recent, Exhibit 11 provides evidence that an increasing proportion of VAPG grant recipients exhibit online marketing and sales strategies for their products as time progresses. Therefore, it is likely that higher levels of success over time for recipients attaining the final step in business development are being observed.

Exhibit 11. Online Presence by Latest Grant Year, All Grant Recipients 2001-2016 (N = 2,139)

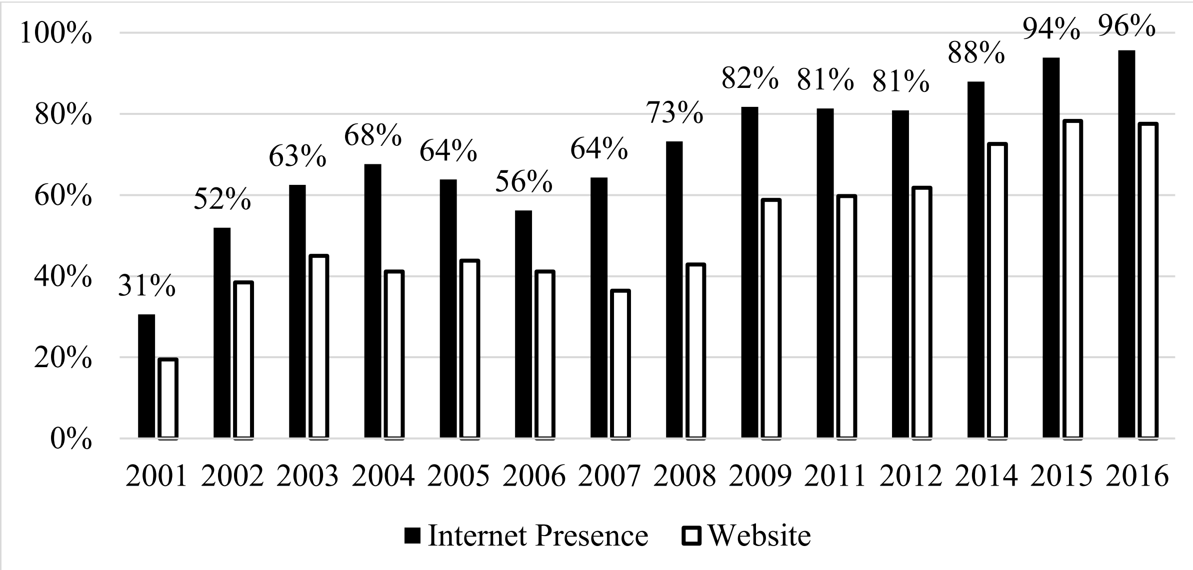


Exhibit 12 shows that of all grant recipients with an internet presence in August 2019, almost four-fifths are on Facebook, which is the most heavily used form of social media. A little less than a third of recipients with an internet presence are on Twitter and Instagram, and only one in ten recipients with an internet presence use Youtube, Pinterest, or LinkedIn.

Exhibit 12. Social Media Usage, Grant Recipients with Internet Presence (N = 1,647)

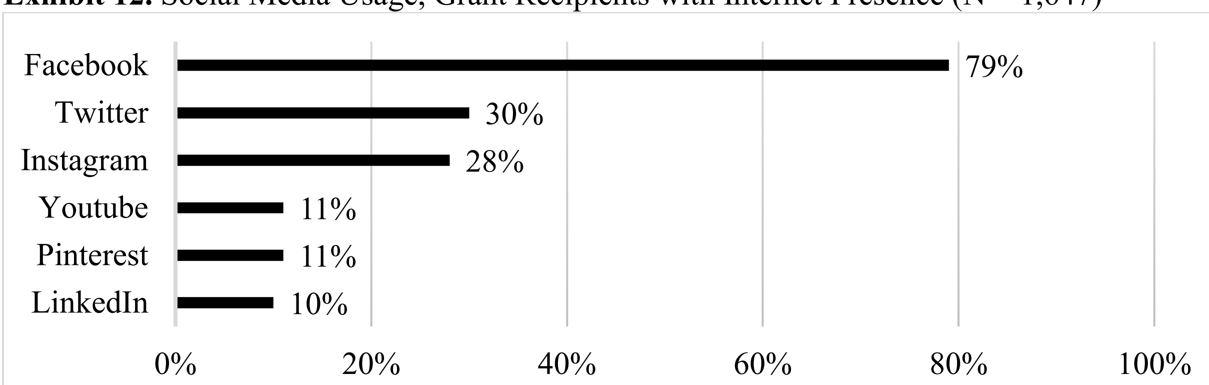
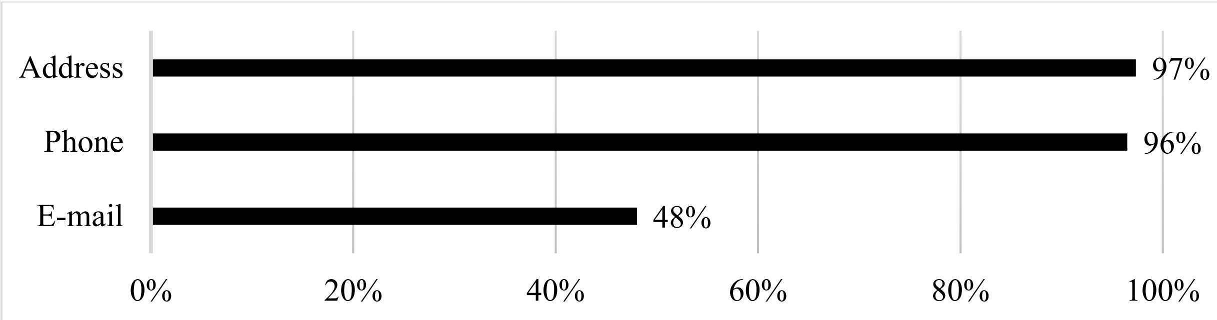


Exhibit 13 indicates that of all grant recipients with an internet presence, almost all offer an address or phone number by which they can be contacted. A little less than half of these recipients offer a specific email address by which they can be contacted, although many recipients with a website offer an embedded email option on their site.

Exhibit 13. Communication Options, Grant Recipients with Internet Presence (N = 1,647)



From Exhibit 14, it is possible to find information on the number of full-time employees for about three-fourths of all grant recipients with an internet presence in August 2019. In addition, eighteen percent of grant recipients with an internet presence advertise job openings. Almost twenty-three percent of grant recipients who have a website advertise job openings on their website.

Exhibit 14. Employment Information, Grant Recipients with Internet Presence (N = 1,647)

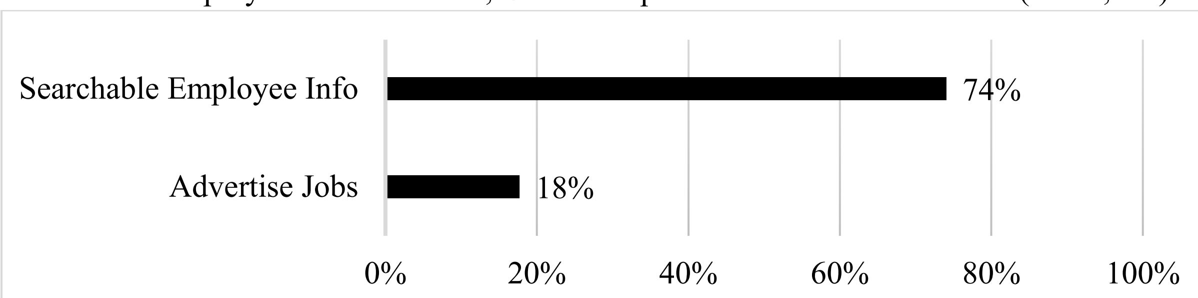


Exhibit 15 shows that the current average and median number of employees of grant recipients who received their latest grant from 2010 to 2016, assuming they have a website in August 2019, are less than those of grant recipients with a website who received their latest grant from 2001 to 2009. In other words, conditional on the grant recipient being at a stage of business development where it has a website in August 2019, the current number of employees per recipient is less if their latest grant is more recent. This finding reinforces the fact that the number of grants awarded to individual producers has increased over time. A recent study by the USDA Economic Research Service found that VAPG recipients employed five more workers, on average, than nonrecipients did in all three growth periods considered, which were two years, three years, and four years after receiving the grant (Rupasingha, Pender, and Wiggins, 2018). Our numbers supplement this finding by suggesting that the "added jobs" premium of the VAPG program might be lessening in significance as the program ages, perhaps because of increased funding for individual (smaller) producers.

Exhibit 15. Workforce Size by Decade of Grant, Grant Recipients with Website (N = 1,237)

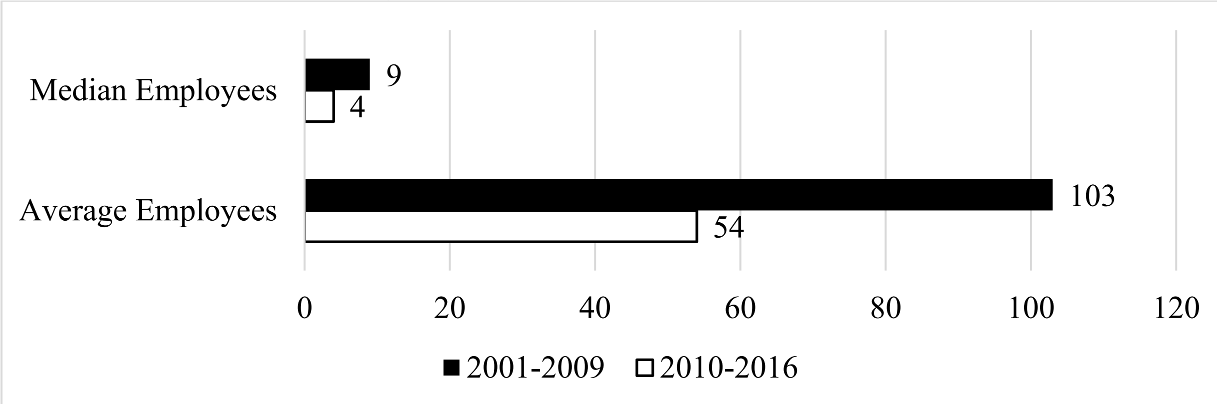
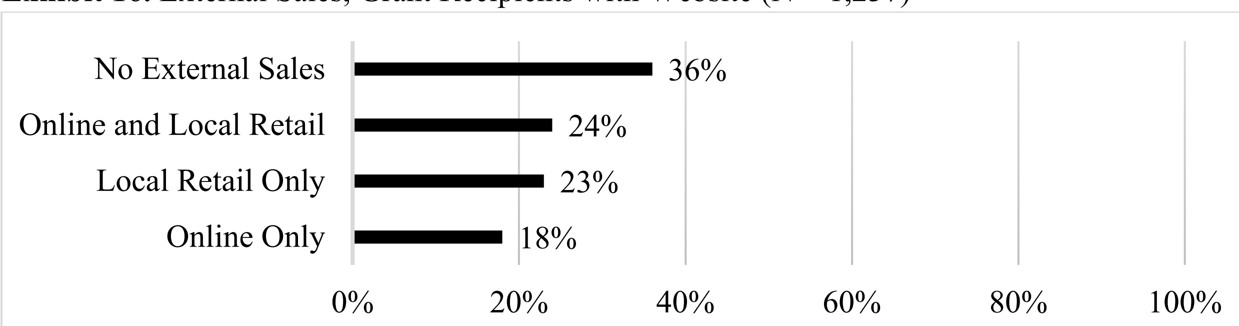


Exhibit 16 indicates that of all grant recipients who have a website in August 2019, just over a third do not offer any type of external sales of their product(s). Almost a fourth of them sell their product(s) both online and through local retailers, almost a fourth of them only sell through local retailers, and eighteen percent of them only sell their product(s) online.

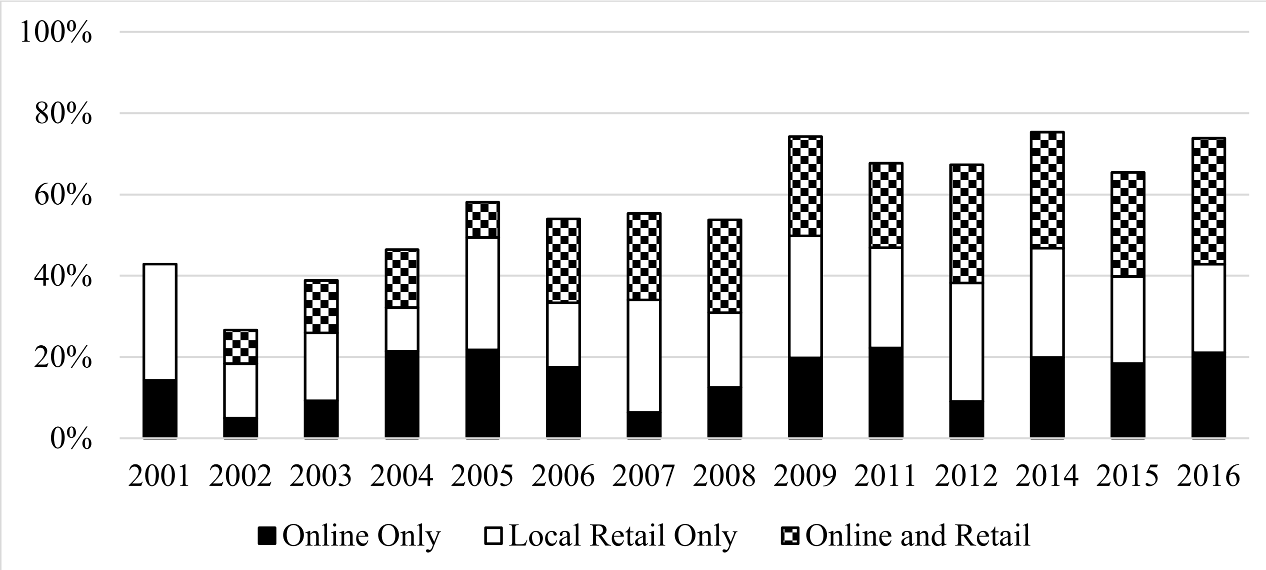
Exhibit 16. External Sales, Grant Recipients with Website (N = 1,237)



When looking at all grant recipients from 2001-2016 broken down by the latest year in which they received their respective grant(s), as shown in Exhibit 17, the proportion of recipients who do not offer external sales of their product(s) in August 2019 typically decreases as the year of their latest grant increases. Similarly, the proportion of recipients who offer some type of external sales, particularly both online and local retail sales together, typically increases as the year of their latest grant increases. Exhibit 17 provides some final evidence that an increasing proportion of VAPG grant recipients exhibit online marketing and sales strategies for their products as time progresses.

It is likely that higher levels of success for recipients attaining the final step in business development over time are being observed because of a digital presence. This trend probably indirectly illustrates the increased proportion of independent producers funded by the program. Exhibit 17 also indicates that the increase in website presence (see Exhibit 11) and decrease in number of employees (see Exhibit 15) of recipients as their latest grant year increases are not driven by simple survival rates (i.e. recipients who were awarded earlier grants often did not stay in business and, if they did, had more time to grow), but are truly connected to greater success of grant recipients (increasingly independent producers) in more recent years.

Exhibit 17. External Sales by Latest Grant Year, Grant Recipients with Website (N = 1,237)



Conclusion

Three separate studies of the USDA VAPG program from 2001 to 2016 found that market share, greater sales, increased grant dollars, having a lower number of producers, owning an operation that targets dairy, flower, fruit, nuts, specialty meats, wheat, or wine commodities, and receiving a VAPG in a prior year were all determinants of successful achievement of the last step (step nine) of business development (selling a product or service two years after receiving a grant). The percentage of grant recipients achieving the final stage of business development has increased over the life of the program, and independent producers have consistently been a significant majority of recipients after experiencing a significant increase in their share of total grants from 2001 to 2007. In fact, independent producers are the organizational form with the highest rate of success in achieving the final stage of business development.

Accordingly, analysis of web-based digital data illustrates that an increasing proportion of grant recipients exhibit online marketing and sales strategies for their products as time progresses. It is increasingly likely that grant recipients have a website in August 2019 if the year of their latest grant is more recent, and it is increasingly likely that grant recipients sell their products online and/or from local retailers/distributors if the year of their latest grant is more recent. Furthermore, grant recipients with a website have fewer employees if their latest grant was after 2010 compared to grant recipients with a website whose latest grants were before 2010, when more recipients were farmer and rancher cooperatives or agriculture producer groups. These marketing and employment phenomena are most likely connected to greater business development success of individual producers over the life of the VAPG program.

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