



## Journal of Applied Communications

Volume 98 | Issue 3

Article 5

# Are Alternative Farmers Yielding Success with Online Marketing and Communication Tools for Their Social Capital and Business Viability?

Katie M. Abrams

Abigail Sackmann

Follow this and additional works at: <https://newprairiepress.org/jac>

### Recommended Citation

Abrams, Katie M. and Sackmann, Abigail (2014) "Are Alternative Farmers Yielding Success with Online Marketing and Communication Tools for Their Social Capital and Business Viability?," *Journal of Applied Communications*: Vol. 98: Iss. 3. <https://doi.org/10.4148/1051-0834.1085>

This Research is brought to you for free and open access by New Prairie Press. It has been accepted for inclusion in Journal of Applied Communications by an authorized administrator of New Prairie Press. For more information, please contact [cads@k-state.edu](mailto:cads@k-state.edu).

---

# Are Alternative Farmers Yielding Success with Online Marketing and Communication Tools for Their Social Capital and Business Viability?

## Abstract

To foster direct-to-consumer marketing, some alternative farmers are shifting to online tools like social media. What is unknown, however, is how they use them and what impacts use has on their business. The purpose of this study was to characterize and determine influences and outcomes of alternative farmers' use of various online communication channels to better understand what they stand to gain (or lose) from participation in these activities as it relates to their farm business viability and social capital. Through survey data of 82 alternative farmers, it was learned their personal use of social media was highly correlated with their business use. Most of their time on the Internet was spent finding farming information and finding and interacting with customers; these activities (along with several others) were positively correlated with online bridging social capital. Personal uses of Facebook were indicative of greater social capital, whereas business uses of any social media were not. For business viability, the more Facebook Page likes their farms had, the more revenue they had, but no relationships were found between their business use of social media and customer loyalty or customer relationship. In sum, alternative farmers' use of online communication tools was positively related to their social capital and their use of Facebook Pages was positively related to farm revenue. This study provides critical benchmark data to later determine the impact of effective use of these tools.

## Keywords

Alternative farmers, online marketing, direct-to-consumer marketing

## Creative Commons License



This work is licensed under a [Creative Commons Attribution-Noncommercial-Share Alike 3.0 License](https://creativecommons.org/licenses/by-nc-sa/3.0/).

# Are Alternative Farmers Yielding Success with Online Marketing and Communication Tools for Their Social Capital and Business Viability?

Katie M. Abrams and Abigail Sackmann

## Abstract

*To foster direct-to-consumer marketing, some alternative farmers are shifting to online tools like social media. What is unknown, however, is how they use them and what impacts use has on their business. The purpose of this study was to characterize and determine influences and outcomes of alternative farmers' use of various online communication channels to better understand what they stand to gain (or lose) from participation in these activities as it relates to their farm business viability and social capital. Through survey data of 82 alternative farmers, it was learned their personal use of social media was highly correlated with their business use. Most of their time on the Internet was spent finding farming information and finding and interacting with customers; these activities (along with several others) were positively correlated with online bridging social capital. Personal uses of Facebook were indicative of greater social capital, whereas business uses of any social media were not. For business viability, the more Facebook Page likes their farms had, the more revenue they had, but no relationships were found between their business use of social media and customer loyalty or customer relationship. In sum, alternative farmers' use of online communication tools was positively related to their social capital and their use of Facebook Pages was positively related to farm revenue. This study provides critical benchmark data to later determine the impact of effective use of these tools.*

## Key Words

Alternative farmers, online marketing, direct-to-consumer marketing

## Introduction

Much of the literature in public relations tends to focus on medium and large enterprises often neglecting the significance and challenge of public relations of small businesses. The definition of a small business or small office varies according to the industry and may be based on number of employees or revenue (U.S. Small Business Administration, n.d.). These businesses often are so small that the role of public relations and marketing often falls on the shoulders of the business owners or other employees whose responsibilities are diverse (Stokes, 2000). While many industries contain small businesses in which public relations efforts could be examined, the agricultural sector offers an interesting angle on many fronts that seems comparable to others. The agriculture industry defines a small farm as having annual gross sales of less than \$250,000 (USDA Economic Research Service, 2013), but this includes 91% of U.S. farms (Hoppe, MacDonald, & Korb, 2010). About 60% are considered "very small," having annual gross income of less than \$10,000 with nearly half of the

*Based on paper presented at the Association for Education in Journalism and Mass Communication Conference.*

operators holding a job outside of farming, as well (Hoppe et al.).

Small-sized farm operations often choose direct-to-consumer marketing to reach customers, bypassing the loss of revenue from indirect sales and allowing a higher level of control of production practices (Payne, 2002). A unifying term used hereafter for these small farms using direct-to-consumer marketing is alternative farmers/farming. In this marketing model, the farms grow products as determined by a mix of their preferences and the market for those products and then find channels to sell directly to consumers through on-farm sales (including Internet sales), farm stands, farmers' markets, and other avenues that afford them access to customers directly. Farmers' markets and roadside farm stands can provide exposure to a potential customer base and then they may seek other avenues like Internet and on-farm sales. Government, nonprofit, and university Extension support is partly responsible for a steady increase in direct-to-consumer marketing during the last few decades. Examples of this growth are the number of farmers' markets in the U.S. has increased consistently from 1,755 in 1994 to more than 7,800 in 2012 (USDA, 2012) and a national study of organic farmers found 80% of those producing vegetables, herbs, flowers, mushrooms, or honey sold at least some of them through direct-to-consumer markets (Waltz, 2004).

Because of the growth of farmers' markets as a marketing channel, alternative farmers now face more competition and may benefit from public relations efforts that would expand their network and foster social changes that would help to create a more favorable business environment. In direct marketing, public relations becomes an important function for alternative farmers even if they believe they are too small to use the term to describe their communication efforts. However, in the face of few staff, a lack of expertise in public relations, and very little time, the public relations functions of these alternative farms must have unique characteristics and require an examination of whether and how inexpensive tools of the trade like websites, email, newsletters, blogs, and social media may impact these small businesses.

### **Direct-to-Consumer Marketing Online**

Much of the literature examining communication functions of small-farm businesses does not use the term "public relations." Instead, researchers lump public relations activities into the concept of direct marketing despite delineations those within public relations and marketing would like to make between the two. Therefore, when referring to direct marketing activities, we are including public relations as a part of that but using the terminology from the base of literature that has examined alternative farm business communication efforts. Because relationships between farmers and consumers are at the heart of the direct marketing concept, the Internet in general and social media in particular have been encouraged in a wide variety of publications as effective tools for alternative enterprises because of their ability to facilitate communication between these two groups (Adam, Balasubrahmanyam, & Born, 2010; Gordon, 2010; Smith, 2011). Though a much-documented digital divide exists between urban and rural residents (Whitacre & Mills, 2007), the number of farmers using the Internet is steadily increasing, aided by the introduction of mobile technologies. In 2013, a 67% of U.S. farms had Internet access compared with 62% in 2011, and 14% of all farmers conducted agricultural marketing activities over the Internet, up from 12% in 2011 (USDA NASS, 2013).

However, very little empirical research has been conducted on small farmers and the effectiveness of online direct marketing, and existing studies tend to focus on direct marketing via a farm website rather than social media. For example, one 2006 study of small farmers across the U.S. found though a majority of the farms had no website, farms with websites generally had higher levels of gross farm sales than did farms without websites, and a higher percentage of farms with websites earned more

than 75% of their household income from the farm than did farms without websites (Brown & Baer, 2006).

The broad business and communications literature offers explanations of the outcomes of social media. Most often, social media is cited as affecting many non-financial outcomes that later foster financial ones for businesses. These non-financial outcomes often are described under the concept of customer engagement. Fostering customer loyalty is one commonly named impact of using social media (Blanchard, 2011; Sashi, 2012). Another is customer communication/interaction, which should, theoretically, foster customer loyalty and increase frequency and yield of purchases (Chu & Kim, 2011; Mangold & Faulds, 2009; Murdough, 2009; Sashi, 2012). Few studies, however, have shown correlations between social media and financial outcomes for businesses in general, let alone small-farm businesses.

### **Direct Marketing, Online Tools, and Social Capital**

Previous empirical studies of farmers and their reasons for using direct marketing cite incentives were (1) control over their production and (2) higher profits for the same amount of production (Kirwan, 2004). Other potential benefits exist, both to direct marketing and social media use, beyond these two incentives. These benefits are the result of the cultivation of informal exchange relationships (both online and face-to-face) through what may be better described as public relations (as opposed to marketing) activities. Informal exchange relationships may not provide as immediate or measurable results but still offer avenues of support particularly for small farmers (Sutherland & Burton, 2011). Outcomes from these relationships can be direct, such as the ability to receive credit from local vendors or a loan from a family member to stay in business (Anderson & Jack, 2002; Gustafson & Nganje, 2006), or indirect, such as increased voter support for policy that effects small farms in a beneficial way (Sharp & Smith, 2003) or collective investment in the farming community (Flora, 1995).

These relationships and their outcomes may be understood and measured by applying the concept of social capital. Bourdieu (1986) situates social capital alongside economic and cultural capital as three exchangeable forms of capital that facilitate the movement of actual or potential resources; social capital is a collective asset made up of these resources created from the relationships between members in a group. Within the concept of social capital, Granovetter (1973) describes strong and weak ties, each associated with different kinds of benefits at the level of the individual. In his study of people looking for employment, he found those with more weak ties, associated with bridging social capital, tended to be more successful. Many other studies have supported his findings, and weak ties are generally understood to provide access to resources beyond a person's immediate network. Bonding social capital provides other benefits, including emotional or substantive support and the maintaining of resources (Williams & Durrance, 2008).

Some argue social capital is increasing, most often citing the Internet's role in facilitating communication and relationships (Lin, 1999). This is a broad literature and authors treat social capital in the context of the Internet differently. Hampton and Wellman (2003) found an online discussion group in a localized community enhanced weak ties and increased interaction among neighbors. Similarly, Kavanaugh, Reese, Carroll, and Rossen (2005) found for individuals with high levels of bridging social capital, using the Internet as a communication tool may enhance face-to-face interactions. Ellison, Steinfield, and Lampe (2007) found a strong positive relationship between Facebook use and both types of social capital, with bridging being impacted the most. Ko and Kuo (2009) found self-disclosure through blogging directly impacted bloggers' perception of their own bonding

and bridging social capital levels, which in turn effected their subjective well-being.

No known study exists to date on the interaction between American small farmers' Internet use and social capital. However, a wide band literature exists on farmers' face-to-face relationships that create social capital, though most studies treat social capital as a variable determining farmers' willingness to adopt technological changes within a broader theoretical orientation of the diffusion of innovations theory. These studies are most often about the global South, influenced largely by the adoption of the concept as a development tool by the World Bank (Grootaert 2004; Sanjeev & Gangadharappa, 2010; Tu, Li, & Tsai, 2010; Woolcock & Narayan, 2000). Case studies in this area generally measure social capital as a trait of a community or village, mapping it to development measures, though some such as Wolz and colleagues (2010) measure it at the individual household level and relate it to business outcomes such as farm income. Wolz et al. also measured bridging and bonding separately, ultimately determining that bridging social capital was a significant determinant of farm income for small farmers in Ukraine. Studies conducted in the West are more likely to problematize the concept of social capital in rural development, though often they also cite its benefits to individual farmers. For example, Sutherland and Burton (2011) found social capital was important for small farmers in Scotland, particularly in access to labor, but also call into question its usefulness as a development strategy particularly due to questions of scale.

This study focused on the individual farmer level and sought to understand the potential benefits of social capital and how it relates farmers' use of different online tools and outcomes from that use.

### **Purpose and Objectives**

Farmers are a unique and critical group to examine in terms of their use of online marketing and communication channels because they are likely to be living and/or working in rural areas. They likely are not accessing and using the Internet-based mediums in the same way as others in urban and suburban settings. Alternative farmers often have to handle their own marketing, whether that be direct-to-consumer and/or through facilitating relationships with wholesalers, retailers, schools, and restaurants and online communication tools are a way to achieve that. Also, from a variety of societal levels (i.e., consumers, state government, federal government, nonprofits), the push to foster local food markets further highlights the necessity to begin exploration of whether these tools provide tangible benefits for farmers in being able to market their business.

The purpose of this study was to characterize and determine influences and outcomes of alternative farmers' use of various online marketing and communication channels. The following objectives guided the research:

- To determine what influences alternative farmers' adoption of online mediated communication channels, answering the following: What social media are they using for personal vs. business uses? What types of activities do they engage in online and for how much time?
- To analyze how their use of and interactions in online communication channels (particularly social media) relates to social capital and business viability.

### **Methodology**

Online survey methodology (using Qualtrics) was deemed appropriate since the questions this study addresses require farmers to have and use the Internet on at least a weekly to every other week basis. Previous recent surveys of farmers show most U.S. farmers have access to the Internet, use it on a weekly basis, and access it via mobile devices and laptops/computers (AgriCouncil, 2012; Hyde, Spaulding, Tudor, & Mahatanankoon, 2012). The online survey was optimized for taking on mobile

devices or laptops/desktops and for 56 kilobytes/second Internet connection speeds.

The instrument included questions about farm characteristics, use and motivations for use of on-line media for personal and business, use of marketing channels, social capital, farm business viability (revenue, perceived customer loyalty/communication), and demographics. Most of the measures were researcher-developed or adapted from literature in collaboration with a panel of experts that included an agricultural economist extension agent with expertise in direct marketing, an alternative farms extension agent, an entrepreneur for a start-up organization designing an online tool for farmers, and an educational director for an alternative farmers group (who also is an alternative farmer). The instrument was piloted with two alternative farmers who provided additional input.

Scales for social capital were used from Williams (2006) and had a reliability with the data in this present study of  $\alpha = .88$  for online bridging social capital,  $\alpha = .77$  for online bonding social capital,  $\alpha = .71$  for face-to-face bridging social capital, and  $\alpha = .80$  for face-to-face (FTF) bonding social capital. Measures for business viability included farm business revenue (entered as a whole number by respondent) from the previous year (because they should have it documented from filing their taxes in April), a customer loyalty scale adapted from Jones, Taylor, and Bansal (2008) ( $\alpha = .82$  in this study) and a customer relationship scale adapted from Thomson (2006) ( $\alpha = .92$  in this study). Their personal use of Facebook, Twitter, and blogs were measured with yes/no questions, and then they provided the number of friends, followers, and blogs followed. Their farm business use of these same tools plus email newsletters was measured with yes/no questions and then they provided the number of likes, followers, blog viewers, and email newsletter subscribers for their farm. With each question relating to Facebook or Twitter, they were encouraged to click a link to open those websites (opened in a new tab/window) to check the exact number. Their time spent engaged in various Internet activities was measured on an ordinal scale for each activity (1 = Never, 2 = 59 minutes a month or less, 3 = 1-3 hours a month, 4 = 1-3 hours a week, 5 = 4-7 hours a week, 6 = 8-14 hours a week, 7 = 15-21 hours a week, 8 = 22 or more hours a week). The same scale was used to measure time spent doing those activities on various online tools/services (email newsletter, forums, Facebook, Twitter, blogs, Pinterest, YouTube, and other). The survey was designed so only questions that applied to the respondents were shown to them. For example, if a respondent indicated he spent 0 hours on the Internet in an average week, then he did not answer the next series of questions measuring how they spend their time on the Internet in that average week.

Convenience sampling was employed by emailing the invitation to participate and survey link through eight alternative farmer organization listservs throughout Illinois and print newsletters. A modified version of the Dillman Tailored Design Method (Dillman, Smyth, & Christian, 2008) was used where an initial invitation with the link was sent, followed up by one reminder a week later. The survey was open for four weeks during July to accommodate varying initial invitation dates sent through the organizations, but for each group, the collection occurred over two weeks' time only.

Through email, the survey went to 2,006 recipients. Given the similarity of the organizations' audiences/members, it is also very likely for any given person to also belong to one or more of the other organizations included. Unfortunately, the listserv owners had no way to only include farmer subscribers when sending the survey and would not allow the researchers access to the data to eliminate duplicates across the groups. So although the number of recipients seems high, overlap between them probably existed and some may not have been farmers (therefore discouraged from taking the survey); therefore, response rate could not be accurately determined. Respondents were incentivized to participate by offering to enter their name into a drawing for one of two \$50 pre-paid credit cards.

Protection was put on the survey to block people from taking it more than once based on their IP

address. The first two questions excluded people who were not farmers or part of a farming operation with extensive knowledge about the business via family or other relationship. Questions on characteristics of their farm sorted non-alternative farmers.

In total, 120 farmers responded. After eliminating respondents who completed less than 40% of the survey (32 respondents) and respondents whose characteristics identified them as a conventional farmer by indicating they primarily produced commodity crops and nothing else (4 respondents) or more than 90% of their sales were to a grain elevator (2 respondents), 82 respondents were included in the analysis. The high dropout may be linked to the length of the survey; it took an average of 31 minutes (SD = 2.4) for respondents to complete. Low response also can be contributed to the timing (July) of the survey aligning with farming season for summer crops and farmers market season.

## Results

Demographics consisting of respondents' age, gender, race, education, and farm characteristics aid in determination of generalizability of the results of this study. Respondents ranged in age from 19 to 82 years old, with an average age of 51 years (SD = 12.8). Sample gender breakdown was 43.9% ( $n = 36$ ) female, 40.2% ( $n = 33$ ) male, and 15.9% ( $n = 13$ ) not responding. It was primarily white (80.5%,  $n = 66$ ). Only one respondent each indicating African American, Native American, and other (3.6% total), and 15.9% ( $n = 13$ ) not responding. Most of the sample had a college education: 32.9% ( $n = 27$ ) 4-year college degree, 17.1% ( $n = 14$ ) master's degree, 15.9% ( $n = 13$ ) some college, and 7.3% ( $n = 6$ ) 2-year college degree. Six (7.3%) held a high school/GED degree, and two (2.4%) held a doctoral or professional degree (JD, MD). Respondents' ( $n = 62$ ) acreage ranged from 0 to 510 with an average of 75.6 (SD = 127.1).

With respect to time spent farming, the average (4.14, SD = 1.72) indicated most had farmed for 11 to 15 years or less (scale: 1 = less than 1 year, 2 = 1 to 5 years, 3 = 6 to 10 years, 4 = 11 to 15 years, 5 = 16 to 20 years, 6 = 21 or more years). The top agricultural commodities/products grown or produced were vegetables (61%,  $n = 43$ ), fruits (53%,  $n = 37$ ), poultry/egg (37%,  $n = 26$ ), ornamental horticulture (nursery, greenhouse, Christmas trees, flowers) (27%,  $n = 19$ ), grain/oilseed (23%,  $n = 16$ ), beef cattle (21%,  $n = 15$ ), hog (11%,  $n = 11.2$ ), and goat (14%,  $n = 10$ ). The farm revenue for the sample ranged from a net loss of \$20,000 to a net gain of \$30,000 with an average net gain of \$568.59; notably, only 38% ( $n = 31$ ) indicated they could provide an estimate of their net revenue for the previous year. The respondents represented 48 different counties in Illinois, which is about half of the total number of counties in the state. Most of the farms employed one or two to three full-time employees. About 35% ( $n = 27$ ) owned a smart phone.

## Objective 1a

Internet use was defined in the survey for respondents as "using an Internet browser, such as Internet Explorer or Firefox, or Internet-enabled phone or tablet computer to search, to look at websites, use social media, email, check markets or weather, and so on." Respondents' time spent per week on the Internet average was 16.86 hours (SD = 12.00).

Personal use and farm business marketing use of social media were fairly similar. Chi-square tests revealed significant associations between personal and business use with moderate to large effect sizes (see Table 1).



Table 1  
*Personal vs. Farm Business Marketing Use of Social Media*

	N	%	<i>f</i>	X <sup>2</sup>	Phi
Personal Facebook	78	60%	47	23.40**	.61
Business Facebook	71	61%	43		
Personal Blog	78	32%	25	11.98**	.45
Business Blog	71	31%	22		
Personal Twitter	78	10%	8	15.18**	.54
Business Twitter	70	19%	13		

*Note.* Personal use of blogs was framed as reading or posting to farm-related blogs, whereas business use was framed as using a blog to promote/market their farm/products.

### Objective 1b

Respondents' indicated spending most of their time on the Internet seeking information about farming, interacting with customers, and finding customers (see Table 2).

Table 2  
*Internet Time Spent on Various Activities*

	N	M	SD
To seek information about farming	81	3.53	1.24
To interact with customers or potential customers	81	3.19	1.63
To find customers or potential customers	81	2.94	1.60
To interact with people (non-farmers) who share my values about farming and food systems	81	2.56	1.47
To provide information about farming	81	2.51	1.25
To find information about political issues as it relates to farming	81	2.51	1.24
To find people (non-farmers) who share my values about farming and food systems	81	2.26	1.34
To interact with other farmers	81	2.16	1.04
To find other farmers	81	1.99	1.04
To engage in political issues as it relates to farming	81	1.84	1.01

*Note.* Scale 1 = Never, 2 = 59 minutes a month or less, 3 = 1-3 hours a month, 4 = 1-3 hours a week, 5 = 4-7 hours a week, 6 = 8-14 hours a week, 7 = 15-21 hours a week, 8 = 22 or more hours a week

Person Product-Moment Correlation revealed the only significant correlation between demographics and these online activities was age and interacting with other farmers ( $n = 62$ ,  $r = -.29$ ,  $p = .025$ ), meaning the younger the respondent, the more time they spent on the Internet interacting with other farmers. Correlations between the different types of social capital and time spent on various Internet activities revealed online bridging social capital was most strongly, positively correlated with most of the activities (see Table 3).

Table 3

*Correlations between Social Capital and Time Spent on Internet Activities*

	FTF Bridging	FTF Bonding	Online Bridging	Online Bonding
To seek information about farming	-.013	-.068	.176	-.013
To interact with customers or potential customers	.282*	.266*	.405**	.145
To find customers or potential customers	.197	.150	.402**	.139
To interact with people (non-farmers) who share my values about farming and food systems	.098	.037	.540**	.159
To provide information about farming	.104	.155	.345**	.193
To find information about political issues as it relates to farming	.170	.025	.344**	.152
To find people (non-farmers) who share my values about farming and food systems	.069	.039	.472**	.080
To interact with other farmers	.189	.251*	.361**	.310**
To find other farmers	.059	-.055	.196	.110
To engage in political issues as it relates to farming	.223	.137	.394**	.121

Note. \*  $p < .05$ , \*\*;  $p < .01$

## Objective 2

### Social capital

Using independent samples t-tests, effects of online tools use on social capital were determined. Respondents who used Facebook on a personal level had a higher level of online bridging social capital,  $M = 3.70$  ( $SD = .70$ ), than those who did not,  $M = 3.25$  ( $SD = .82$ ),  $t(74) = -2.54$ ,  $p = .01$  (2-tailed). Effect size was moderate (eta squared = .08). Whether respondents used Facebook personally did not affect FTF bridging social capital, FTF bonding social capital, or online bonding social capital. Respondents who used blogs personally (reading or posting) had a higher level of online bridging social capital  $M = 3.90$  ( $SD = .77$ ), than those who did not,  $M = 3.35$  ( $SD = .81$ ),  $t(74) = -2.99$ ,  $p = .004$  (2-tailed). Effect size was moderate to large (eta squared = .11). Effects of personal blog use on other types of social capital were non-significant. Personal Twitter use did not impact any of the types of social capital either.

The number of respondents' personal Facebook friends and Twitter followers did not correlate with any types of social capital. The number of blogs they followed, however, did significantly correlate with face-to-face bonding social capital ( $n = 23$ ,  $r = .545$ ,  $p = .007$ ), face-to-face bridging social capital ( $n = 22$ ,  $r = .45$ ,  $p = .04$ ), and online bonding social capital ( $n = 23$ ,  $r = .49$ ,  $p = .02$ ).

With respect to farm business use of online tools, respondents who used email newsletters for marketing had higher FTF bridging social capital,  $M = 4.15$  ( $SD = .53$ ), than those who did not,  $M = 3.82$  ( $SD = .63$ ),  $t(66) = -2.40$ ,  $p = .02$  (2-tailed). Effect size was moderate (eta squared = .09). They also had higher levels of FTF bonding social capital  $M = 4.01$  ( $SD = .60$ ), than those who did not,  $M = 3.68$  ( $SD = .71$ ),  $t(68) = -2.51$ ,  $p = .02$  (2-tailed). Effect size was moderate (eta squared = .06). Whether they used Facebook, Twitter, or blogs for business purposes did not impact any of the types of social capital.

**Business viability**

Independent samples t-tests were used to determine whether those who had a farm business website were different from those who did not in terms of three dimensions of business viability. About 63% ( $n = 52$ ) had a website for their farm. The t-tests did not reveal any significant ( $p < .05$ ) differences in business viability (revenue, customer loyalty, and customer relationship) whether they had a website or not.

Relationships between their personal and business online following and business viability were examined with Pearson Correlation analyses. Twitter and blogs were excluded because the numbers of respondents pairwise with revenue in particular were so low (less than 7). Personal and farm Facebook page friends/likes were both highly positively correlated with revenue, but email newsletter subscribers was not (Table 4).

Table 4  
*Correlations between Online Following and Farm Business Viability*

	<i>N</i>	<i>M</i>	<i>SD</i>	Revenue	Customer Loyalty	Customer Relationship
# of personal Facebook friends <sup>a</sup>	49	4.51	3.52	.54*	.03	-.03
# of farm Facebook Page likes	31	4.11	788	.83**	.12	.12
Farm email newsletter subscribers	29	3.08	607	.38	.27	.11

*Note.* \*  $p < .05$ , \*\*  $p < .01$ . <sup>a</sup>1= 50 or fewer at 50 friends increments through 11= more than 500 friends. <sup>b</sup>1=25 or fewer at 25 followers increments through 9= more than 350. <sup>c</sup>1= none at 3 blogs increments through 9= more than 20.

**Conclusions and Implications**

This research provided empirical evidence describing the relationships between alternative farmers’ use of the Internet, social media, and email newsletters and their social capital and farm business viability. The relationships revealed offer implications for farmers, educators, and small enterprises considering the usefulness and effectiveness of these media for direct-to-consumer marketing.

The associations found between personal social media use and farm business social media suggest that personal and business use are intertwined. Given the low number of employees on these farms, those farming in the field are likely the same ones maintaining their farm’s social media presence. Perhaps their drive to use it personally made adopting it for their business less of a barrier. They may combine their personal and business use during the same time sessions under the assumption that if they are already on the sites for personal reasons, it would not take much more time or effort to use or experiment with it for their business. It may be useful for extension agents and other educators to encourage these farmers to first adopt personal pages on social media to help them gain comfort and experiment with the tools. This can also be helpful in networking with their current, loyal customers who may identify the farmer more so than the brand/business. Then, when they launch their business social media sites, they can easily invite those friends and followers to their brand pages.

Considering the total average time respondents indicated spending on the Internet (nearly 17 hours/week), roughly half of that time was spent engaging in the 10 Internet activities measured in this study that related specifically to their farm business, but primarily that time was spent finding

farming information and customers and interacting with customers. In sum, farmers are primarily driven to use the Internet to foster financial gratifications. It is unlikely these items captured every Internet-based activity they engage in for their farm, so how the other half of that time is spent is unknown. The only demographic relationship in these activities was age; younger farmers were more likely to spend more time interacting with other farmers online. This is likely because younger people are more accustomed to interacting in online space, both with friends and with unknown individuals (Thayer & Sukanya, 2006). Notably, interacting with other farmers online was also related to FTF bonding, online bridging, and online bonding social capital.

The more time respondents indicated spending on online activities related to their farm (except for seeking information about farming), the more online bridging social capital they had. This finding makes a case for the positive potential of online interactions because it demonstrates they are more likely to have relationships with different social groups, thus a greater number of weak ties. Previous work has shown bridging social capital to be linked to greater success (Granovetter, 1973; Wolz et al., 2010). As other studies have revealed, online interactions tend to have the biggest impact on bridging social capital (Ellison et al., 2007; Ko & Kuo, 2009).

Both FTF forms of social capital were correlated (albeit less strongly) with the time farmers spent interacting with customers online. These results support the findings in previous studies that the Internet, as a communication tool, may enhance FTF interactions (Hampton & Wellman, 2003; Kavanaugh et al., 2005). More positive outcomes on social capital were demonstrated from the personal use of online media tools than their business uses. Personal Facebook use was correlated with more bridging social capital. Neither the number of Facebook friends nor Twitter followers were related to social capital, leading to the conclusion that the quality of the relationships in these channels is more important than the quantity. The exception here is that the number of blogs they followed positively correlated with FTF bonding, online bridging, and online bonding social capital. Their business use of email newsletters was also positively correlated with FTF bonding and bridging social capital. These findings suggest that email and blog use are activities that these farmers carried out as an extension of their in-person relationships, rather than meeting new people through them, showing a fundamental difference between email and social media. The number of blogs followed was also correlated with bonding social capital, suggesting it is more of a space to interact with their communities than to bridge out to other communities, whereas Facebook and writing a blog tended to be more of a bridging activity. This suggests the farmers tend to follow the blogs of people they know (in fact, people they're close to), but meet new people through writing a blog, which again shows Internet interactions can promote and enhance FTF relationships (Hampton & Wellman; Kavanaugh et al.).

Business uses of Facebook or Twitter were not indicative of social capital. Social capital was measured as a personal trait, which may explain this finding; however, with such small farms, these farmers' social capital can directly affect the success of their business. This finding suggests that their business uses of social media are not as critical to their social capital as their personal uses.

With respect to farm business viability, few positive correlations were found between the size of their Facebook and e-newsletter networks and revenue, customer loyalty, or customer relationship. Notably, though, the number of Facebook Page likes they had was indicative of higher farm revenue, which may suggest those who effectively use Facebook and gain large followings of their Page are able to market better. Recall these characteristics of their business use were not correlated with any types of social capital. Social capital was primarily connected with their use of online media on a personal, individual level, meaning if these farmers are to create the best possible opportunities

for themselves and their farm business, using it in both ways (personal and business) seems ideal to foster social capital and revenue.

This study did not show relationships between the non-financial outcomes of customer relationship and customer loyalty that are typically touted as the intermediary and more easily affected variables for a business using social media (Chu & Kim, 2011; Mangold & Faulds, 2009; Murdough, 2009; Sashi, 2012). Perhaps this shows these farmers are not using the tools more effectively but instead grew their Facebook Page following through an existing customer base that has a high number of Facebook users and simply promoting their Pages well. Without examining more specifically how the businesses are using their Facebook Pages, we cannot know exactly why there is a direct relationship between number of Facebook Page likes and revenue and not the non-financial outcomes. The other issue to consider here is that we measured the farmers' perceptions of customer relationship and loyalty rather than as a characteristic of the customer. A more robust design would include measuring that from the customers directly. Still, the significant relationship between revenue and Facebook Page likes for farm businesses is evident of the potential of an effective Facebook presence for these alternative farm businesses.

### **Limitations and Recommendations**

Generalizations from this study should be made with caution given the use of convenience sampling. To improve on the limitations of this research, the data should be collected again during a less busy time of year for this population (e.g., January-March) to improve response rate. Clearly, the survey should also be shortened to reduce the high dropout rate and/or greater incentives should be offered. Another consideration is the online survey mode means it more likely captured respondents who spend more time online than others. The findings suggest the next practical step would be providing training to these farmers so that they are using social media for their business more effectively. Then, characteristics of effective use for small, alternative farms selling direct to consumers could also be suggested if data show positive impact on their social capital and business viability.

With regard to recommendations for practice, this study suggests alternative farm businesses and perhaps other small enterprises should:

- Spend more time online to achieve bridging social capital, which is associated with business success (Wolz et al., 2010).
- Use social media personally (rather than just for business) to achieve greater social capital.
- Use Facebook Pages and Facebook Profiles for potential higher revenue.
- Use blogs and email newsletters to enhance face-to-face relationships that exist with customers.

## References

- Adam, K., Balasubrahmanyam, R., & Born, H. (2010). *Direct marketing*. Retrieved from <http://attra.ncat.org/attra-pub/directmkt.html#Internet>
- AgriCouncil. (2012). 2012 Media channel study. The Association of Business Information & Media Companies. Retrieved from <http://www.abmassociation.com/Document.asp?DocID=25>
- Anderson, A. R., & Jack, S. L. (2002). The articulation of social capital in entrepreneurial networks: A glue or a lubricant? *Entrepreneurship and Regional Development*, 14(3), 193–210.
- Blanchard, O. (2011). *Social media ROI: Managing and measuring social media efforts in your organization*. Boston: Pearson Education.
- Bourdieu, P. (1986). The forms of capital. J.G. Richardson (Ed.), *Handbook of Theory and Research for the Sociology of Education* (pp. 241–258). Westport, CT: Greenwood Press.
- Brown, C., & Baer, A. (2006). An examination of the use of e-marketing by small farms in the northeast. *Journal of Food Distribution Research*, 37(1), 40–47.
- Chu, S-C., & Kim, Y. (2011). Determinants of customer engagement in electronic word-of-mouth in social networking sites. *International Journal of Advertising*, 30(1), 47–75.
- Dillman, D., Smyth, J., & Christian, L. (2008). *Internet, mail, and mixed-mode surveys: The Tailored design method*. Hoboken, NJ: Wiley.
- Ellison, N. B., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook “friends:” social capital and college students’ use of online social network sites. *Journal of Computer-Mediated Communication*, 12(4), 1143–1168. doi:10.1111/j.1083-6101.2007.00367.x
- Flora, C. B. (1995). Social capital and sustainability: Agriculture and communities in the Great Plains and Corn Belt. *Research in Rural Sociology and Development*, 6, 227–246.
- Gordon, R. (2010, December). Tweeting from tractors. *American Vegetable Grower*, p. 54.
- Granovetter, M. S. (1973). The strength of weak ties. *American Journal of Sociology*, 78(6), 1360–1380.
- Grootaert, C. (2004). Measuring social capital: An integrated questionnaire. World Bank Publications.
- Gustafson, C. R., & Nganje, W. E. (2006). Value of social capital to mid-sized northern plains farms. *Canadian Journal of Agricultural Economics/Revue canadienne d'agroeconomie*, 54(3), 421–438. doi:10.1111/j.1744-7976.2006.00058.x
- Hampton, K., & Wellman, B. (2003). Neighboring in netville: How the Internet supports community and social capital in a wired suburb. *City & Community*, 2(4), 277–311. doi:10.1046/j.1535-6841.2003.00057.x
- Hoppe, R. A., MacDonald, J. M., & Korb, P. (2010). Small farms in the United States: Persistence under pressure. *USDA-ERS Economic Information Bulletin*, 63, Retrieved from: <http://ssrn.com/abstract=1557208>
- Hyde, D., Spaulding, A. D., Tudor, K., & Mahatanankoon, W. (2012). Information and communication technology adoption: A study of northern Illinois farmers. Seattle: Agricultural & Applied Economics Association Annual Meeting. Retrieved from <http://ageconsearch.umn.edu/bitstream/124751/2/Poster610.pdf>
- Jones, T., Taylor, S., & Bansal, H. (2008). Commitment to a friend, a service provider, or a service company: Are they distinctions worth making? *Journal of the Academy of Marketing Science*, 36(4), 473–487.

- Kavanaugh, A., Reese, D., Carroll, J., & Rosson, M. (2005). Weak ties in networked communities. *Information Society, 21*(2), 119–131. doi:10.1080/01972240590925320
- Kirwan, J. (2004). Alternative strategies in the UK agro-food system: Interrogating the alterity of farmers' markets. *Sociologia Ruralis, 44*(4), 395–415. doi:10.1111/j.1467-9523.2004.00283.x
- Ko, H.-C., & Kuo, F.-Y. (2009). Can blogging enhance subjective well-being through self-disclosure? *CyberPsychology & Behavior, 12*(1), 75–79. doi:10.1089/cpb.2008.016
- Lin, N. (1999). Building a network theory of social capital. *Connections, 22*(1), 28–51.
- Mangold, W. G., & Faulds, D. J. (2009). Social media: The new hybrid element of the promotion mix. *Business Horizons, 52*(9). doi: 0.1016/j.bushor.2009.03.002
- Murdough, C. (2009). Social media measurement: It's not impossible. *Journal of Interactive Advertising, 10*(1), 94–99.
- Payne, T. (2002). U.S. farmers markets, 2000 a study of emerging trends. U.S. Dept. of Agriculture, Marketing and Regulatory Programs, Agricultural Marketing Service, Transportation and Marketing Programs, Marketing Services Branch.
- Sanjeev, M. V., & Gangadharappa, N. R. (2010). The notion of social capital and its value in promoting acceptance of biotech crops: Pre-Introductory assessment of an Indian case. *Outlook on Agriculture, 39*(4), 305–310.
- Enneking, U., Neumann, C., & Henneberg, S. (2007). How important intrinsic and extrinsic product attributes affect purchase decision. *Food Quality and Preference, 18*(1), 133–138. doi: 10.1016/j.foodqual.2005.09.008.
- Entman, R. (1991). Symposium framing U.S. coverage of international news: Contrasts in narratives of the KAL and Iran Air incidents. *Journal of Communication, 41*(4), 6–27. doi: 10.1111/j.1460-2466.1991.tb02328.x.
- Environmental Working Group. (2011). Shopper's guide to pesticides in produce. EWG Website. Retrieved from <http://www.ewg.org/foodnews/summary/>.
- Gamson, W.A. (1989). News as framing: Comments on Graber. *American Behavioral Scientist, 33*, 157–161.
- Goffman, E. (1974). *Frame analysis*. New York, NY: Free Press.
- Golan, E., Kuchler, F., & Krissoff, B. (2007). Do food labels make a difference? . . . Sometimes. Amber Waves. November. Retrieved from <http://naldc.nal.usda.gov/catalog/10244>.
- Goodwin, J.N., Chiarelli, C., & Irani, T. (2011). Is perception reality? Improving agricultural messages by discovering how consumers perceive messages. *Journal of Applied Communications, 95*(3), 21–33. Retrieved from <http://journalofappliedcommunications.org>.
- Govindasamy, R., & Italia, J. (1997). Consumer response to integrated pest management and organic agriculture: An econometric analysis. New Brunswick, NJ: Rutgers Cooperative Extension, New Jersey Agricultural Experiment Station. Retrieved from [http://dafre.rutgers.edu/documents/ramu/ipm\\_wtp.pdf](http://dafre.rutgers.edu/documents/ramu/ipm_wtp.pdf).
- Guégen, N., & Jacob, C. (2012). The effect of menu labels associated with affect, tradition and patriotism on sales. *Food Quality and Preference, 23*, 86–88. doi: 10.1016/j.foodqual.2011.07.001.
- Hartwell, H. & Edwards, J. (2009). Descriptive menus and branding in hospital foodservice: A pilot study. *International Journal of Contemporary Hospitality Management, 21*(7), 906–916. doi: 10.1108/09596110910985359.
- Howard, P. H., & Allen, P. (2006). Beyond organic: consumer interest in new labeling schemes. *International Journal of Consumer Studies, 30*(5), 439–451.

- Indiana State Department of Agriculture (2013). Indiana agritourism and farmers' market directory. Retrieved from [http://www.in.gov/apps/ISDA\\_FarmersMarket](http://www.in.gov/apps/ISDA_FarmersMarket).
- Iowa Fruit & Vegetable Growers Association. (2013). Iowa fruit & vegetable growers association farm search. Retrieved from <http://www.ifvga.org>.
- Irlbeck, E.G., Akers, C., & Palmer, A. (2011). A nutty study: A framing analysis of the 2009 Salmonella outbreak in peanut products. *Journal of Applied Communications*, 95(2), 48-59.
- Klintman, M. (2006). Ambiguous framings of political consumerism: Means or end, product or process orientation? *International Journal of Consumer Studies*, 30(5), 427-438.
- Klonsky, K., & Greene, C. (2005). Widespread adoption of organic agriculture in the US: Are market-driven policies enough? [Presentation]. Paper presented at the American Agricultural Economics Association Annual Meeting. Providence, RI. Retrieved from <http://purl.umn.edu/19382>.
- Kuypers, J.A. (2010). Framing analysis from a rhetorical perspective. In P. D'Angelo and J. A. Kuypers (Eds.), *Doing news framing analysis: Empirical and theoretical perspectives* (286-311). New York, NY: Routledge.
- Leopold Center. (2003). *Ecolabel value assessment – Consumer perception and food business perceptions of local foods*. Ames, IA: Leopold Center. Retrieved from <http://www.leopold.iastate.edu/sites/default/files/pubs-and-papers/2003-11-ecolabel-value-assessment-consumer-and-food-business-perceptions-local-foods.pdf>.
- Leopold Center. (2004). *Ecolabel value assessment phase II – Consumer perception of local foods*. Ames, IA: Leopold Center. Retrieved from <http://www.leopold.iastate.edu/pubs-and-papers/2004-05-ecolabel-value-assessment-phase-two>.
- Loureiro, M. L., & Hine, S. (2002). Discovering niche markets: A comparison of consumer willingness to pay for local (Colorado grown), organic, and GMO-free products. *Journal of Agricultural and Applied Economics*, 34(3), 477-487.
- Meyers, C., & K. Abrams. (2010). Feeding the debate: A qualitative framing analysis of organic food news media coverage. *Journal of Applied Communications*, 94(3-4), 22-36. Retrieved from <http://journalofappliedcommunications.org>.
- Minnesota Department of Agriculture. (2013). Minnesota grown directory. Retrieved from <http://www.mda.state.mn.us/food/minnesotagrown/procorner/mn-grown-about.aspx>
- North Carolina Department of Agriculture and Consumer Services (2013). North Carolina farm fresh. Retrieved from <http://www.ncfarmfresh.com>.
- Olson, J.C., & Jacoby, J. (1972). Cue utilization in the quality perception process. Proceedings of the Third Annual Conference of the Association for Consumer Research, 167-179.
- Ruth, A.M., Eubanks, E.E., & Telg, R. (2005). Framing of mad cow media coverage. *Journal of Applied Communications*, 89(4), 39-54.
- Steenkamp, J.E.B.M., Wierenga, B., & Meulenberg, M.T.G. (1986). Analysis of food quality perception processes. *Netherlands Journal of Agricultural Science*, 34, 227-230.
- Stolle, D., Hooghe, M., & Micheletti, M. (2005). Politics in the supermarket: Political consumerism as a form of political participation. *International Political Science Review*, 26(3), 245-269. doi: 10.1177/01925121050553784.
- Tuorila, H., Meiselman, H.L., Bell, R., Cardello, A. V., & Johnson, W. (1994). Role of sensory and cognitive information in the enhancement of certainty and liking for novel and familiar foods. *Appetite*, 23, 231-246.



Zehnder, G., Hope, C., Hill, H., Hoyle, L., & Blake, J. H. (2003). An assessment of consumer preferences for IPM- and organically grown produce. *Journal of Extension*, 41(2). Retrieved from <http://www.joe.org>.

### **About the Authors**

Katie Abrams, an assistant professor in the Department of Journalism and Technical Communication at Colorado State University, researches how people make sense of and participate in communication about food and agricultural issues. Abigail Sackmann has her Master of Science from the University of Illinois Graduate School of Library and Information Sciences. She has a strong passion for studying and promoting local food systems.