

## **Facebook Use Among Agricultural Doctoral Students to Promote Agriculture & Research**

### **Introduction/Need for Research**

It is important for doctoral students and future scientists to have a “passion and talent for communication and outreach” instilled in them before graduating (Smith, 2016, p. 185). According to Graybill (2010), it would be in the best interest of agriculturalists to use Facebook when communicating agricultural/scientific information to the public. Social media has now become a first choice for many agricultural producers, crop consultants, and retailers to interact with the public (Campbell, 2017). Beyond those working in agriculture, 86% of 18- 29-year-olds and 80% of 30- to 49-year-olds use social media (Pew Research Center, 2017). People in this age group depend on Facebook for information much more so than television, radio, and newspapers (Shearer & Gottfried, 2017). Additionally, millennials are influenced by information posted from their peers to Facebook (Shearer & Gottfried, 2017). With Facebook having so much influence, it seems fitting that future agricultural scientists and leaders would also use it, and other social media, to interact with the public and promote their research and agriculture.

The purpose of this study was to determine how often future agricultural scientists enrolled in [University’s] plant and soil sciences doctoral program use social media to promote information about agriculture and/or science.

### **Conceptual Framework**

The conceptual framework for this research is based on the Media Dependency Theory. This theory states that the greater the need/dependency on media, “the greater the likelihood that the information supplied will alter various forms of audience cognitions, feelings, and behavior” (Ball-Rokeach & DeFleur, 1976, p. 6).

Conflict and changes in society can increase media dependency (Ball-Rokeach & DeFleur, 1976). There are controversial topics surrounding agriculture including genetically modified (GM) seed, certain agricultural chemicals, and Roundup resistance, to name a few. In a survey of undergraduate students, many admitted to not knowing much about GM foods but wanted to know more about the topic (Ruth, Gay, Rumble, & Rodriguez, 2015). A survey by the National Opinion Research Center found that 65% of participants were very or moderately interested in agricultural and farm issues (National Opinion Research Center, 2016). Social media pages of agricultural scientists can be sources the public uses to find out more about these controversial topics.

### **Methodology**

The researchers studied second and third year plant and soil science doctoral students who were enrolled in the Center for Agri-Science Communications, a communications development program at [University]. An environmental scan was made of each participant’s current social media use by analyzing their Twitter, LinkedIn, Facebook, ResearchGate, and Instagram accounts. For each social media platform, researchers first determined if participants had a profile, then they determined how many academic, agricultural, or scientific posts participants made on that platform within the last year (June 1, 2016 – June 1, 2017). Relevant posts included any posts (including shares) about agriculture, doctoral student classes/studies, teaching,

participating in conferences, or their personal research. Relevant research posts on ResearchGate included any “Current Research” posted in 2016 or 2017.

### Results

Social media use was varied with one student not having any social media presence. Not having an account on the corresponding platform was noted by “n/a.” Results are displayed in Table 1.

Table 1  
Agricultural/Science Social Media Posts of Doctoral Plant and Soil Science Students

Participant	Twitter	LinkedIn	Facebook	ResearchGate	Instagram
1	n/a	n/a	n/a	0	n/a
2	1	0	0	1	0
3	n/a	n/a	n/a	n/a	n/a
4	n/a	n/a	n/a	0	n/a
5	n/a	n/a	5	6	0
6	0	n/a	n/a	0	n/a
7	n/a	n/a	0	0	n/a
8	n/a	n/a	0	n/a	0
9	n/a	n/a	0	2	n/a
10	n/a	0	2	2	n/a
11	0	n/a	0	1	3
12	n/o	n/a	n/a	9	n/a
13	0	0	10	n/a	0
14	0	0	0	0	n/a
15	n/a	0	0	1	n/a
16	0	0	2	0	0
Ag/scholarly Posts	1	0	19	22	3
Total Accounts	6	6	11	13	6

### Conclusions

ResearchGate had the most participant accounts (n=12). ResearchGate also had the highest number of relevant posts (n=22). LinkedIn, the other “professional” platform, had six participants, but none were posting relevant content. Facebook had higher participation with 13 accounts and 22 academic posts. Instagram and Twitter both had six accounts with three and one academic posts respectively.

### Implications/Recommendations/Impact on Profession

It seems that personal social media pages are not being utilized to promote agriculture or research by the sample. It would be in the best interest of graduate students to use their social media pages to promote their research, even just to other ‘friends.’ This spreads agricultural and scientific information and could be viewed by future employers. More emphasis should be put on promoting agricultural science with social media by future agricultural scientists. These data should be compared with use of social media to promote science/research of other graduate students in agri-science fields.

## References

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