Research Support Services for the Field of Agriculture:

Semi-structured Interviews
Executive Summary

- Faculty members are generally satisfied with library services; they want journal articles immediately, though interlibrary loan is ‘fantastic.’ Graduate students need help with the literature. Off-campus students, at whatever level, need more help.
- Collaborations are increasing, suggesting some need for a wider array of journals.
- Accurate, complete data is hard to get; they would likely use weather data and some economic data if they could get them.
- Researchers want training on GIS software, statistical software, and on analysis of larger data sets. Data sets are growing with collaborations and complex topics.
- Publishing practices are diversifying beyond core journals into interdisciplinary titles for collaborations, to find wider audiences, and sometimes into open access journals, in order to make articles more available and find higher metrics.
- Researchers praise open access journals for faster publication times, higher metrics and availability, and deplore uneven quality, poor peer review and subverting of content from core journals.
- There is a tension between dropping use and citation of society journals, and that professional meetings, supported by society journals, are the most common way researchers keep up with trends.
- Social media is important for following trends, to see early notifications and to promote research to other audiences. It was not a way to find collaborators.
- Needing to find and win grants is a constant. Respondents strive to keep experienced staff and run experiments that require spans of years on soft funds; they spend up to half their time generating and managing them. Due to short award terms and stringent standards, graduate students may not get to work on projects.
- Respondents asked the magic wand for time and money, for support to write articles, literature reviews or grants, to teach students to be better writers, and that scientists would share their information freely, without reservation or guarding.
- The largest challenges to agricultural researchers in relation to their research, discounting environmental conditions and whims of human subjects, are solvable with a regular and adequate supply of time, money, space, support and staff.
- Public misconceptions and fears and the influence of self-proclaimed experts, often far removed from production, on public and legislative opinion is an enormous problem for agriculture. Population pressures, environmental degradation of land and water, and climate change, will inhibit or prohibit the ability of agriculture to feed the world in an economically fair way, without the rational use of known and future techniques and technologies.
Introduction

The University of Arkansas Libraries was happy to be included in the group of those working with Ithaka S+R to hold semi-structured interviews with agriculture faculty in order to study their research practices. We were particularly interested in examining information-seeking behavior and finding where we might assist more fully.

Grounded theory interviews involve listening, reading, and immersing oneself in the content of the interviews, and coding for themes. Training from Ithaka S+R provided the base line; Juliet Corbin’s mainstay title (Corbin and Strauss 2015) was the primary supporting text, while Kate Charmaz (Charmaz 2014) provided additional insights. The questions were open-ended, but eliciting answers and developing follow-up questions took practice—as evidence, the first interview took roughly twenty minutes, while several later ones were well over sixty minutes. We used a voice recorder, a smartphone app, and a different iPad app to record the interviews.

The local Institutional Research Board (IRB) considered this an exempt study. We anonymized the transcripts and will delete the files once attendant publications are completed. The Agriculture graduate student selected the initial pool of candidates for interviews, based on their publication lists, to reduce personal influence on the choice of interviewees from the librarian. We made one broad interview request by email, and then followed up over time with individual emails to an array of people from the pool representing a diversity of ranks, subject areas, and gender.

The responses to requests for interviews varied. The time of year was a factor; we received training in mid-April and started holding interviews when we returned. Agriculture faculty are heavily scheduled in April, May and June, between semester duties, conferences, planning for field studies, and planting. However, the subjects graciously made time for the interviews. I appreciate their courteous and generous support. That we were limited in number of interviews and timeframe, and holding interviews at a hectic time of year, meant that we did not have representation from all the departments suggested by the operational definition for the study. In particular, we would have liked to capture information from poultry science, a vital industry in the state. If possible, we may do interviews with faculty in those departments not yet involved at some future date.
Methods

In the semi-structured interviews, we asked standard questions but did have the potential for additional or follow-up questions. In a few cases, we asked clarification questions after the interviews; this was to expedite the transcription process and in particular to be sure of some technical language. We supplied Ithaka S+R five of the fifteen transcripts, for the national survey report, and will send a copy of this report (see Appendix 1, for questions, solicitation email, IRB documents and other documents).

We administered the interviews as a team, worked on the transcriptions serially, and on the coding as individuals and as a team, as recommended in the Ithaka S+R workshop. We used spreadsheets for the transcriptions, with time stamps and notations in another column with definitions or unusual factors to consider; additional columns contained coding. After a first coding run, I wrote memos to support my thinking and to suggest a narrative.

In the transcriptions, and the quotations, not all speech dysfluencies, repeated words or filler words have been included, for the sake of clarity; some casual words or phrases, such as ‘gonna’ and ‘wanna’ and ‘cause are rendered as standard English. Quotes in the narrative are labeled with the speaker’s identifier; in some cases, they are abbreviated or excerpted. The content’s meaning is intact, but not all sentences in a particular answer are necessarily included; some remarks have been merged when they were from the same person on a topic. Emphasis has been included in the text when it was present in the audio recordings.

To help preserve anonymity, generic terms have been substituted for descriptive subject language, and the pronouns “they,” “them,” and “their” used as the generic singular; we used faculty member or professor or researcher and their plural forms regardless of tenure status, position or rank.

This report focuses specifically on factors or themes related to libraries and library services. There were a host of other topics, involving challenges to the researchers, challenges to agriculture as a field, and challenges to the human population as a whole that were beyond the scope of the recommended length of report. Though some will be touched upon here, we plan to describe these concerns in other publications or venues.
Research Focuses

Most of the respondents interviewed hold dual appointments between the Bumpers College of Agriculture, Food and Life Sciences and the state’s Division of Agriculture. This increases the chances that a given individual will have multiple research focuses. Many respondents work on local, regional or national collaborative projects, which likewise increases research focuses. All respondents felt themselves to be a part of agriculture, though some of the researchers who worked with human subjects felt themselves somewhat apart from researchers who are field or bench scientists, in control of subjects and in research methods and definitions. Researchers identified themselves as being in a department, or sometimes in a subfield of the department, such as being a rice researcher, or a weed scientist, versus as of Crop Soil and Environmental Sciences, for example, but also identified as members of their respective departments and as a part of the college, in further conversation.

With appointments in the Division of Agriculture come expectations to work on collaborative projects with researchers at other institutions, especially other land grant campuses, but also with industry, and with NGOs. Researchers with the greatest number of research focuses were largely the same people who collaborated with multiple other individuals or entities. Primarily these were persons in agricultural economics and agricultural statistics and those working in sustainability in various ways, such as in biofuels, organic foods, food systems, or life cycle assessments. They worked with such a diverse array of colleagues that they were metaphorically ‘all over the map’ in their studies and publications. Within their range, they were more likely to be working on concretely applied rather than theoretical projects and publications.

With more researchers working collaboratively and across disciplines, there is more need for both the materials, primarily journals, but also data sources common to their affiliated subjects or departments. They explore additional journals that relate to their collaborative interests, such as food systems or sustainability:

- “And...it fits in, it’s a component, that overlays all of the rest of the agricultural disciplines, since it tends to be trans-disciplinary. So where I used to be a (subject) (type of scientist) and I was very focused on one or two things (specific subjects)....
Sustainability tends to be much more, by its nature, holistic, and again trans-disciplinary. So the kinds of...materials that I find myself using now will be information on soils, integrated pest management, environmental interaction with plants, ...in cropping systems, (how) cropping systems fit into food systems. Ah, so, very broad, much broader then I used to be." C13

- “Ah, for... many of the issues that we research are more on the development side of things, so we will go to, maybe, the food policy journals or development journals.” C15

Libraries as a Source of the Literature

The literature of the agricultural disciplines was regarded as important, even critical to faculty success; however, researchers are conversant with it, and use it as a matter of course, almost casually, though several complained that they lack enough time to read as much or as often as they would like. The literature is instructive, serves as a source for grounding methods and supporting information, or to develop or render supporting evidence for a particular research model. Some researchers feel that the published, peer-reviewed literature is an underutilized resource, citing time pressures and availability as factors.

- “I think what is really important is the literature. It is, stays important to us, and is really critical to me, and I think it is critical to every scientist, and I think we exploit a lot less of this than we should; and to really to read a good article, read an article well, often requires me more than a day. And review often takes several days.... It's really critical to us, you know....if we use literature properly... whatever experiments we'll do, we'll do a lot better.” C12

- "You've got to be well-read; you've got to keep up with the literature." C10

Faculty members are not pleased in general with the practices of graduate students in regards to the literature. Modeling (by faculty members) of their own techniques for examining the literature for their students did not seem common, unless students actively sought help. Faculty members supported and would continue to support the efforts of librarians to instruct students, faculty, and graduate students in particular, on how to
search the literature. Specific workshops might be a mode that would attract that audience, but faculty suggested half-seriously that snacks should be included to draw graduate students.

- “So I think, just making sure that we keep both the faculty and the students trained on the best ways of doing...things in terms ...of this information searching is a good thing to do.” C7

There is an apparent tension between individuals’ feeling that what they are doing is adequate, versus the recognition by observers of what potentially could be done with more training, experience, and time.

Our journal subscriptions are less that what would be desirable for a campus of our size and type, according to several researchers, though some (sometimes the same people) also called our collections “fabulous.”

- “…I was surprised, and continue to be surprised...when I do look around for articles, how many are not available here....I came from the University of (larger land grant campus) before I came here and the differences in what we have subscriptions to, what we have access to, is unreal.” C5
- “Well, that is good to know, (rush interlibrary loan) but ah, it would be nice, if there was more money, that we had access to more journals.” C6
- “But....you know the number, I know that databases are expensive....[A]re we keeping the right subscriptions going? you know...touch base once a year or so. I don’t know how you are all managing that now....” C2

Publishing Practices

Most researchers published in journals that they considered ‘core journals’ or typical for their subject area, often titles affiliated with professional societies. They considered their own publication patterns typical of their subject area or department. Those who went beyond that standard were working in a related but different facet of the subject, such as genetics/genomics of an organism, or were seeking a broader audience, higher impact factors, or all of these; an example would be looking beyond agricultural
education journals to broader education journals, or beyond weed science to an interdisciplinary agricultural journal. Those with more focus areas were more likely to publish in journals outside their own discipline, but within the range of their collaborators or the collaborative subject, such as sustainability, food systems, life cycle analysis and so on. *Theoretical and Applied Genetics* and *Molecular Breeding* were broader titles mentioned; *PLOS One* was a title mentioned as a possible outlet outside the disciplines.

There was a counter-thread that suggested that scholarly publishing had become such a commercial affair that some researchers preferred to put their own work in open access journals, despite qualms about quality of peer review and scoffing references to predatory journals. Open access publications were sometimes called ‘open source’ by researchers, and this distinction is problematic. In discussions, researchers regarded page charges as equivalent to open access fees, with the expression of some faculty being that they are comparable at least in intent if not in total. Limited financial support for research and publication was one factor driving this tendency to publish in open access titles, given that the fee is set, vs. by the page; another is the length of time it takes for review and publication in standard peer-reviewed journals. Some respondents held that open access journals are at least *available* to everyone, which is desirable for research, for researchers’ h-indexes *and* for political aims—that is, open access articles could be directly available to the public, which might prove return on investment to those with oversight.

• “Round numbers, that is $100 a page—I don’t publish in (society journal).….I don’t publish in (another society journal), too expensive. So the short answer is: I publish with Elsevier. Why? No page charges, as their rule. I publish in open access, if I can’t find an Elsevier (title), or if I have something...(identifying material removed), somebody just has the burning desire to put in (society journal), I put it in (same society journal); but my first (choice) is *no page charges*. I don’t worry about the impact factors, and no page charges, and I really, really try for—(pause)...[N: *Open access?]*. Open access. (nodding). Because I think that is the way to make an impact.”

  o And on a related point: “....But that is true. In our professional world, that is, peer-reviewed refereed articles are the coin of the realm. And Dr. (administrator) was very adamant, “That may be, but I am talking about
people that fund you. They don't read those things. We need an avenue to prove to the people that pay the bills around here, we...are worth the money they invest.’ And he was right. Absolutely right.” C9

- “…also with the journals...another issue that I find...-- I was never a big fan of journal publications for many things, and I think it has become kind of a business in itself...Yeah, so you publish to advance your position, not to advance knowledge, many times. And I don’t like that....Ah, but one thing that I find...disturbing is the time that it takes to get a response from these publishers...But...you have to just wait. So now there are many, at least in (subject) many open source journals that give a much faster response; that have a much higher impact factor, because they are open source. [N: Open access?] (nodding). And you can get away with many things, that in many other top journals, ah, you won't get. So I think there might be a sacrifice of quality in many of these... but again...your response is much faster, your impact factor (may be higher), because more people read it, so it is a tradeoff.” C15

Climatological data and some other kinds of data that are subscriptions of the Libraries were tools of the disciplines. NOAA, USDA, ERS and NASS data were noted, although they are freely available and not part of our subscriptions. Some complained of data that used to be present that is not included or not accurately included (in that context, USDA/NASS/ERS are recognized as being very short-staffed) and that the reorganization of the USDA pages and broken links are impediments to using materials there.

- “..NASS reporting is getting more limited every year....things that used to be collected are not being collected anymore, and it really makes it harder to, again, validate things you are doing, when you see these huge swings in numbers...” C6

- “Ag data, the actual on the ground production data collection is becoming more and more limited, which makes at least the (subject) analyses a lot more difficult to do.” C6

- “…Data, and many people don’t disregard data, (but) to larger extent, they focus primarily on methods, and that is... if you don’t have good data to start with, as we say...: trash in, trash out. In modelling... you can have the best model
framework there (is) but if you are feeding in bad data you are just getting bad information, and there is no other way around...."C15

Researchers sometimes used commercially available data sources, but described those sources as flawed, incomplete and expensive. Some wished that the campus or Libraries did have subscriptions to some commercial data sets, primarily weather and economic data, though there was not a recommendation made on which packages or products would best assist them. Some wished for training or workshops on literature databases, on software, such as statistical packages, GIS, and other products or techniques.

- “...if we would like to get into using, acquiring data sets of weather, like that, and then using them...then workshops on that would be useful. Ah, you know some workshops on...the proper use of some new SAS or other statistical packages, on how to use these properly, and maybe an ongoing thing about statistics would be useful. And if I had time, you know, I would love to learn more of the stuff that I know you guys have in the library that I just don't have time to use.... You know some of the tools for finding publications and that sort of thing.” C1

- “Well, sometimes just learning the software that you have got to use, and dealing with updates on some of those software and data compatibility and stuff like that. That's, sometimes...a challenge.” C7

While they were obviously appreciative of the assistance of their colleagues, a consistent limitation was the need to have statistical work completed for reporting or vetted for publishing by a small agricultural statistics department whose faculty members are committed ahead by a year or more.

Services

Researchers praised services from the Libraries, but there was confusion about what support is currently available. Rush interlibrary loan and librarians’ willingness to collect relevant materials for classes were the most common unknown services, along with a lack of understanding of the help available for students and faculty. Most said they were happy with certain aspects of the Libraries’ services:
• “Ah, but in terms of operational things, I mean access to the library, I am happy
  with.” C7
• Access to materials online through the Libraries is “a blessing.” C4.
• “But I do enjoy, anytime, and it is rare, but when I do get to come over and actually
  ...hunt for a book-- It’s like ahh, I am in a happy place. It is, I just love it.” C5

Respondents named and used databases, most commonly including *Web of Science*,
*PubMed*, and *Agricola, AgEcon* and “Ebsco” (clarified later as representing the stacked
databases, including *Agricola* and *CAB*). Though often paired with subscription databases,
the most frequently mentioned tool for literature searching was *Google Scholar*. There was
some very limited acknowledgement that materials found through *Google Scholar* might be
available because of the Libraries’ subscriptions. Researchers sometimes found citations
that existed in a particular database through *Google Scholar*, rather than searching through
the interfaces of the databases (*AgEcon* and *Current Index to Statistics* were examples). One
person specified how much he uses EndNote to manage his citations and article content,
from Google Scholar and from the Libraries.

• “You know, I pretty much use *Web of Science* more than anything else. I mean, I use
  *Google Scholar*, too. It is quite good, but my primary would be *Web of Science.*” C8
• “Both, first place is *PubMed*, second is Google, and *Google Scholar* specifically, when I
  know I am looking for a scholarly activity--.” C9
• “I use *Google Scholar* religiously. That’s my number one avenue; because I know it is
  going to get a variety of what is available to me on campus and what is available
  elsewhere....” C5
• “… I normally start maybe with *Google Scholar*, and with those key words, and then
  I’ll say well, it’s in this journal. Then I’ll go over to the library to see if it is,
  the...journal is there... whatever it may be that I am looking for and...follow it that way.” C2
• “…for literature searches, which --certainly when a topic is new, or, or we’re trying
  to make sense of our data and writing it up....ah, well, I love the library site and I
  use.... my first go-to is *Web of Science*. ...for me (it) is a nice broad based database
  that will bring up a lot of different kinds of articles.... That’s a good go-to for me. You
know, start with my terms of, here are the types of things I think I am looking for, put those in, do some searching, see what comes up, and I build off what I'll find, the articles that come up. So I tend to look at the (results)... am I getting what I need? Yeah...that's what I need, okay, but what is that article? Has that been cited? Who has cited it? What else has been done? Oh, you know, how many times, let me pull those up, and, and...build a, yeah, I don't know if scaffold is the right word..."C14

- “Well, I am a big Google Scholar user...that’s probably fairly typical....and then what I can't find there, I will go to Agricola or some of the other databases.... I know, you never know what you are missing; so, and then I go to ProQuest and do dissertation and theses searches.” C3

- “....then I go to EndNote, so that I’ve got that article (citation) in my EndNote, and I’ve got...the entry from Google Scholar put in there; but you asked how I get that? About half the time or more, I can't get it on the Internet directly, you know. So I go to our library catalog, I go to the main library page....; in fact I keep it up almost every day, because I'll be accessing something, every day--...And... I'll go to articles and more, then I'll click on "journals and newspapers" I'll go fill in the article name or just partly and, you know, it auto fills it for me and I'll click on that and it'll make me fill in my user name, I go to the journal and download the article. If I can't find it there, and maybe the journals are stuck keeping things that go back more than 15 years or so, 15, 20 years, and I can't get it there and I’ll go to Interlibrary Loan ...and submit it to you all, and then you send me a copy, usually within a day.” C12

One researcher held a few counts against the use of Google Scholar as a main tool, related to its lack of comprehensiveness, its timeframe and its effect on scholarly publications:

- “Well,...I just go to the library website first. So that’s my...database search (clarified as the stacked Ebsco databases). I don’t really trust Google Scholar, because it is too limited to relatively recent open-sourced things and... there is not enough listings there. Ah, although (it is) quick and powerful, and it tends to pull things that other people are using. Unfortunately, I think it is actually misleadingly driving impact factors on journals.” C13
At the same time, several voiced the notion that students, particularly graduate students, and some faculty, need more training in order to use the Libraries’ resources and the literature fully. Many found that their students do insufficient or bad searches, and are not very likely to ask for help:

- “Right, well, and I use it half of the time when my students come in and say: ‘I can’t find...’ and you know they haven’t really looked. And I say, right on Google Scholar, if I can find it there... now go to the library (word obscured) and find...more....I know that’s one good thing this department has done for years is we always have the grad students--we have grad student orientation. One thing you had to get done was to meet with whoever was our librarian for that, to understand what all the search options were.” C7
- “…what I am constantly amazed by is: they (students) don’t know how to do (literature) searches.” C11
- “[P]erhaps if I am just speaking of...your role and others;...little workshops, which you offer, but...for graduate students,...to help them get into the mind set on doing research and how to find pieces of information, that you have helped us do....There is a new generation of students, that are more difficult to work with, and that is off-campus students; and the literature review...certainly that could be something that you could help with.... But to help them...feel like they have someone they can call, and can trust, and can help them get started. Helping them navigate the library, the webpage....Half of our graduate program is now off-campus students.” C2

Researchers recognized that it might be difficult to attract or compel students to any kind of training, without reinforcement of the professors; many students think that their methods are fine unless or until they run into trouble.

- “Yeah...that is probably a tough one too because...students grow up with, I guess students grow up with the expectation that if it is out there, that they can find it. [N: and their skills don’t match their confidence?]. That is exactly right, but I don’t know how you get beyond that, because if I think I can do it myself, it doesn’t matter what you offer me, I think I can do it myself....I guess you just have to run up against the rock and then you find out who can help.” C3
Another respondent insisted that students don’t read books, to his disappointment, but thought that books would continue as a format; one researcher dislikes the format of e-books, finding them hard to use compared to printed volumes.

- “And then my thing about the total electronic deal is...about books. I don't like e-books. I don't like being stuck looking at just one page and then I cannot flip here and flip there and I just have a problem with that.” C4
- “And it’s all shifted. Ah, students don’t read books... And as a book reader, you know, I wonder about that. I mean I really still deeply respect the monograph as a form of knowledge and a source....something with weight. You know...they tend to be more in depth, and ...I might be...looking at just one paper, just one chapter that I really need, or a paper in the inside of a monograph, but the other pages around it have supporting information that can also weigh in, that you don’t get in your typical 9 page journal article. And so, the idea of perusing books and keeping up with books, I think so, is going to be a change that we'll see. I don't think that books will die.” C13

Interlibrary Loan services drew high praise, but some researchers skipped articles that they would have liked to use if not immediately available here; they understood that interlibrary loan helps make up for missing subscriptions, but would prefer to have the journals here.

- “Especially, you know, just being (distance) off campus. The days when Interlibrary Loan was very limited in what they would provide, ah, it made things a lot tougher; but my goodness, it is fantastic now to be able to sit in the office and get literally anything I want. So yeah, it is wonderful.” C8
- “So I, usually the steps are, is go to (database), find the paper, and of course: oh, for $36 you can have this paper---- thanks, but I will wait. And then I go to (the libraries' web address) and look under electronic journals and hope like everything that we have it there in that subscription. And if we don't, then I usually keep looking, to be right honest. Unless it is something I just...[N:You don't use ILL? Why not?]-- “It's two more clicks.” C9
• “I use the ILLIAD system quite a bit, ah, if I absolutely need to, but typically by the time something comes in on ILLIAD I (have) found something to replace it and I don’t need it anymore….I am just more of an instant gratification researcher.” C5.

• “ah, I guess the other thing is-- Interlibrary Loan is good. I mean I had really good luck, when I searched for something…but I am impatient, and, you know, when you look it up, you want to get it right now. I don’t want to wait 24 whole hours!” (laughing). C6

In addition, evidence that it is sometimes a question of time pressure appears:

• “But it is so nice when it is available. I mean you can crank out articles so much faster and then move along and get to collect data, as supposed to spending more time writing the darn thing.” C5

Other Types of Support

Some researchers wished for other types of support, such as workshops on software, such as statistical software, for someone to support the production of literature reviews to support projects, including grant proposals, or help with administrative management of grant proposals:

• “Now in practical terms... okay, data, ah, I would like to have more access....as we have access you know, to many good journals, publications through the library or through different systems. But it is not true for databases (sources of specific data). Many times, the database...if I am engaged in a project that I need the data, I have to pay for it.” C15

• “I would love to have somebody beside me, who could, and I know the library does, (to) a certain extent, this-- ... But not only find the research for me...related to a certain topic, but write up a nice lit review, that really summarizes the latest and greatest of what is going on, ...the gaps, you know the things you could do; ...the other thing would be getting good (subject data) from every (area) in this state, that sure as heck would help me a lot...” C6

• “Yeah, and then the other thing, and again, this is probably beyond library, ah, but related to those lit reviews------we are also relying on grant money now, and (with)
the amount of time that we have to spend putting together those proposals, it would be nice to have somebody to handle all the administrative side, that has nothing to do with the research, and then to do that background piece. *Let the PI's write, okay, this is what we want to do and this is how we want to do it. But all the other stuff, which is about 80 percent of what you are putting together... (pause) [N: *Let somebody else manage it and nail it down?]* Exactly, we could do a lot more, and they would probably be much better written in the end, honestly." C6

- “Ah, maybe I can talk a little bit about grantsmanship and some of those challenges, which, I mean, that, as far as research goes, I think, that is one of the biggest challenges is finding funds and identifying appropriate sponsors for your research. And for me, one of the biggest challenges is just budgeting and putting together budgets and working through, especially if it is a large project you can get several institutions involved. ...It is...a real challenge... and everything from just getting the numbers to add up correctly to getting all the different institutions signed up and categorized correctly... I don't think that our university has some of the same resources available that other institutions do to help individual PIs... make all those connections, and...I worked with, I've been a co-PI where other institutions, they will (select) a designee at their university, that does all the leg work. And we don't have that.” C8

  o An additional comment, when it was mentioned that librarians at one institution help with management of grants: “Well no, think about...it certainly wouldn’t be appropriate for a lot of grants, but for grants that have overhead, I mean you could see how that could be kind of a self-funding thing with institutional support.” C8

**Keeping up with Trends**

Researchers followed trends by attendance at professional meetings, by reading or scanning professional journals and tables of contents, by working with graduate students, reviewing manuscripts, and reviewing grant proposals, with a few mentions of alerts from databases or from specific journals, and of listservs. They used bibliographies of articles
that they had found useful as a way to find more sources and track authors. Some researchers felt that they were not keeping up with trends as much as they liked. It was a source of sardonic humor and tension (One quote was “that’s assuming I do, right?!”).

Reading time is difficult to come by:

- “Basically, it seems like I need something to force me to do it, because while I want to, my time will not allow it if it is just something that is optional, so I have to have something in place.” C5
- “Yeah...well, 25 years ago, when I was in graduate school, I spent one afternoon every week in the library. Reading whatever I wanted to do; whatever I wanted to. I didn’t have any structure to it. I’d go to the library and go through current journals, and I would, you know, something would interest me in one journal and I’d look at the references and I’d go there, so... the whole chain of things. Ah, and I don’t do that anymore, but that was a wonderful way of being very broad and not following...anything for a (concrete) reason.... Yeah, yeah, and I would enjoy doing that again, but just from time constraints, I can’t do it. Ah, but I still do read quite a bit. I look through--there are probably 6 or 7 journals, that I read at least the table of contents every issue. And (I) will pick out journals that are, and articles that are of interest in those journals. And you know, the others, a lot of other journals...something will catch my eye, and I will look at it. But, you know 6 or 8 journals I look at very, very closely. Every issue.” C8

They described social media applications, such as Facebook, Twitter, Instagram and Pinterest as secondary or tertiary sources of trends. Though some researchers had profiles in Researchgate, it was mostly used to show citations to some of their work and to provide copies of some works to the world at large. One researcher mentioned finding pdfs of some articles through Google Scholar inside ResearchGate, and one said that graduate students used Researchgate and Youtube as places to find methods and information. One researcher mentioned that they had a ResearcherID, but other profile products such as ORCID and Mendeley were not mentioned. Using online webinars and workshops was mentioned by a researcher.
• “I think the way we use media even scientifically is changing....I can watch some workshops, conferences or webinars, or even (content) live on Periscope... Again I said, I keep up with some of my information through social media, that I'll see things come through that I pay attention to, so I think....there is going to be new sources of news, of media, and information-sorting that for our faculty is going to be a, always be a challenge. It used to be so much easier.” C13

• “ResearchGate...is what is often a source, because that's a little quicker if (they’ve) got their PDF from ResearchGate I just go and click on it....” C12

Respondents might use social media to push information to help others follow trends, and professional information might hit social media ahead of official notices:

• “...I attend conferences, and I am the director of a new project that is going on, that's helping me read, that’s forcing me to read a lot of upcoming research....(identifying text omitted). And...we take research in our field, make them (article summaries) into infographics and podcasts and post them in...Facebook and Twitter and all that for close to 1000 (subject participants) across the nation now. So they expect that to be a pretty consistent, you know as far as what we push out, and so we try.” C5

• “You know, even...the USDA is very active that way. And...I follow (national director of a federal department), ah, his Facebook and Twitter account, because...every once in a while he posts something that can really important to me, like “This is coming out today, this is the advance warning, it's going to be announced at 5 o'clock this afternoon.” And I can be on the lookout for a program announcement. And getting those program announcements-- the USDA is very good about actually posting those on social media simultaneous to email and sometimes it might take days before it shows up to me in my email, but I can get it instantaneously thorough social media. Ah, so that’s important.” C13

No one mentioned discovering collaborators via social media or via profile products, though that is a common advertising gambit for these products. Collaborators were often local, first, in their departments, their college or in a related department in another college on campus, or second, discovered at professional meetings.
• “I collaborate with a lot of people that I get to know and get to know their areas of interests through conferences.” C5

The biggest challenges to collaboration seem to be in line with the challenges for any other project, including time and funding, but with an additional aspect: communication. It is difficult to run an experiment or complete analyses on your own, but it is even more complicated in collaborations, where they may be working with people in other disciplines, as well as on other campuses.

• “Yeah….I think one of the big things in that is, if ...there could have been more communication between the (person in another discipline) that I was working with and myself on the experimental design. Whereas, he really wanted to do it his way and he had his preconceived design, and if I would have known a little bit more about the material we were working with, that I would probably have perceived some of the challenges we would have down the road, and we might have mitigated that, you know. Because it probably....for me, it cost me thousands of dollars and time and resources to try to process these samples over the last week.” C11

• “Ah, hindsight is always 20 20, isn't it? ... in my case it is always making sure, especially from working with people, outside-- anybody in this college is going to know, yeah, we're going to need those farmers on board right away. For me it is making people outside this college, that aren’t as actively engaged in agriculture, to understand the value of getting that input early on.” C6

**Journals and Metrics**

Researchers may be supporting and citing society publications less and less over time, both as a result of longer term changes in packages for new professors and as an effect of the use by administrators of impact factors or h-indexes as measures of evaluation for faculty. Subscriptions to society journals and payment of society dues are often not part of start-up packages. Libraries may or may not carry society journals because the assumption has been that the researchers would have their own copies. At the same time, the steady purchase of society journals by larger publishers has driven up their prices substantially for libraries in an era when budgets are commonly flat at best.
One experienced faculty member who has been active in a professional society is frustrated by the loss of interest in the associated professional journals from new faculty. If the core journals in a field aren’t consulted, and if tenure track faculty when they publish are chasing publications with higher metrics, such as impact factors, that situation is both regarded as problematic, and as creating a reciprocal problem—the society journals won't achieve higher metrics without being cited. Society journal subscriptions are frequently a major source or the main source of funds for conferences for the same association. Loss of subscriptions taxes the societies and the related disciplines in more than one way, given that attendance at professional meetings is the most common way that researchers discover trends in their fields and discover collaborators.

- “So I have, especially young faculty in my discipline (who) will complain that because impact factor is going to be important in their evaluation process, ah, they have to publish in those directions. And it really has a negative impact, because some of the highest quality of work in our disciplines is not being published in my society's journals. And our impact factor would go up, if it was published there... and so it is a self-fulfilling prophecy, they publish somewhere that has a higher impact factor, ah, which only elevates their personal impact factor. I doubt it has any greater impact in that journal than it would in our journal, and it actually might have a greater impact... in my society journals... but it lowers the impact of our journal, because that work is not being read.” C13

While some researchers seemed to tolerate the common metrics such as h-index or impact factor, and appreciated the fact that they could, for example, generate an h-index through Google Scholar; the responses varied, and among those respondents who mentioned them, mostly negative.

- “Yeah, and then, but it is one of those things that-- faculty want that. I served on a college P and T and departmental P and T last year, and that’s when I-- I told you I learned of predatory journals, I have never heard of such a crazy thing. And that particular representative wanted to know the rating factor. [N: Impact factor?] Impact factor for every candidate that came up on those journals....I was like: "You got to be kidding me!" Surely I am a better advocate for my colleague, if that
person's worthy, than some journal, that has some—[local commentary removed]...Because quantitative is easy enough to document, whereas qualitative, you know, that is like, well, he/she is a really good fit for our department? Does (he/she) do high quality work?!—(and the quoted reply from someone else) 'No, they haven't published this much, ah, no, they don't have a Science or Nature article.' (said in a disdainful voice).” C9

- “Ah, impact factors in agricultural science really disturb me personally. Because I don’t think they tell the story....realistically, if I, ...I’ve gone back to look at impact factors, and tried to make them relative to the readership of our journals and the size of the membership of our society, I’ve even looked at publication numbers, ah, publication factors relative to the value of our industry, etc. And so the typical impact factors don’t correspond to the impact that the science actually makes inside of our discipline or to the stakeholders that we serve....” C13

Although the researchers were not commenting on this problem, citation metrics can be manipulated to gain higher numbers, through self-citation and other means, according to the recent article by Smaldino and McElreath (2016) among others. “This is often summarized more pithily as ‘when a measure becomes a target, it ceases to be a good measure’. ” (p.4) As they suggest, speaking of the h-index, when there’s a mark to hit, people bend the rules of the system to get there. They are, obviously, not the only measure of the quality or utility of publications, or of an author’s work.

**Other Services**

Some knew, and some were surprised, that librarians would work with faculty to find materials and set up assignments, as well as teaching classes in relevant databases and other tools.

- “Well, and I think some of it, it is probably me, but...(librarian’s name) came over. I don’t know, a year and a half or so ago, and was making the rounds....and came in and told me, that she would, she was available to pull together materials for my classes and ya-di-ya, and I had no idea you guys did things like that.” C6
Some mentioned having had help with specific questions and finding articles or other materials in the collections.

- “Ah, and as far as the research articles, like I said, I have yet to be (stumped), I mean, frequently I call the librarian, like the chat with the librarian, whatever it is called. [N: LibAnswers? Ask a Librarian?] (nodding). That’s amazingly helpful, because I don’t even have to pick up the phone. I just-- “hey, I need this.” And oftentimes I can’t find it but it is somewhere available but I just can’t access it and they-- ”here is what you go to, here is the link”-- you just find it. So that’s incredibly helpful.” C5

As mentioned earlier, some researchers mentioned that they might accept help from librarians in the context of providing literature reviews to support grants, or in other tasks, such as discovering where they are cited for promotion and tenure processes, but none noted that they had done so personally. Some respondents complained about the search capabilities of databases and the quality of the descriptive terms assigned to articles by journals, but none suggested that they would consult a librarian to improve their selection of assigned terms or their retrievals.

**Data Management and Repositories**

Some respondents had deposited data in repositories; most were aware that such deposits are an increasing trend. Those who had made their data publically accessible were generally working with other researchers and campuses on large grants, such as from the USDA. One who runs a public research center has been putting specific data sets online in spreadsheets through the Center’s web page, to make them available for FOIA requests. Others have made summary data or related sets available as supplemental materials with publications. Some looked forward to having others mine their results for relevant materials, and some wished that depositing data was common in their own discipline.

- “One of the things I am currently working on, ah, a huge agronomic data set, all from 10 locations, three years....There is roughly 6000 observations, individual observations in this data set, and one of the things that I would like to do when we’ve milked it for everything is to provide it to a repository. Because I think that is
something that people can look at and find all kinds of uses that we haven’t thought of.” C8

- “Ah, I think it is a really cool idea and the opportunities there for secondary data analysis would...I meant they would expand greatly if we would have access to data like that. Ah, but we do not currently do anything like that.” C5

Some expressed the wish that other researchers, especially those who have retired, changed fields, or died, had left behind data sets, so that what remained would be available for analysis.

- “I mean, as I am transitioning in career fields right now, I think this might be really important for me...(M)y predecessor left the office with 3 or 4 file cabinets full of data that I've never done anything with, I just had it sitting in my office, that I really wish it would be archived and be put into a repository, archived some way, because somewhere or somebody could possibly use that. The same with ah, you know, my data sets and... I am not opposed to it by any means; I think there’d be value to it.” C13

- “And they never see the light of day. That’s a really important thing. ...I think we all are in one scientific community, as it is larger, and older, you know, and people started dying out of it, a lot of knowledge is lost. And it is a tremendous amount of information (that) is lost over the years, through a variety of means....And the hardest thing is when...when a scientist dies. And he leaves information behind that hasn’t been (pause), hasn't been published. Because there is no way short of divine intervention that you are going to know some of those things.” C12

Those that haven’t deposited data feel that it is a practice that needs to be better defined in terms of outcomes, credit for work, and value before they will devote scarce time and resources to the prospect; they questioned whether they would lose rights to their data, and what the interests of the University would be. No one suggested that librarians could have or had helped them personally with data management plans or metadata, though it was clear that those who were using data sets from others wished that the data
had been better cleaned and labeled. Use of data sets and data management is mentioned as an area of growth in several ways.

- “A problem is that a lot of that stuff, you know I mean, it is good to have the access to the principle investigator that collected the data, because sometimes you find stuff, you say: Gosh, I don’t know how that is possible. But I am finding these results, so the data is good, but you still need to analyze the data and look at it. Possibly remove some outliers, and all that.” C7

- “To me that’s, data management, spatial data management, spatial regression techniques, that’s going to be the ticket. If you are starting out as a new PhD student. I mean that’s where I think, really, the cookie is going to crumble in the future.” [said particularly to the PhD graduate student working for the Libraries] C7

Conclusions

If there were an overarching word or phrase to describe the daily lives of the researchers we interviewed, it would be “overscheduled” or “stretched thin.” Under the interlocking responsibilities of research, teaching and service, with additional layers of administrative duties and accounting for their work in various ways, there are few free minutes in any researchers’ day. This decreases their ability to participate in campus life.

- “That is right, I mean that cuts across lots of different areas, that it is hard to get faculty involved in anything. I mean (they say) ‘I just want to keep my head down and focus on what I focus on and let somebody else take care of whatever else is out there. And just don’t bother me with it.’” C3

- Some felt that despite working ten hour days, six days per week, “after a while it is like I go home at night with a longer list of things to do than when I came in and I’ve worked all day.” C10

Researchers were interested in learning new methods and techniques, reading more, writing and publishing more, and being able to be responsive to the needs of the university, the state and the world, while staying responsible to local, regional, national and international collaborators, as well as to the people that they work with for projects over time. This complicates the activities of research and publishing. Most respondents felt
themselves to be behind on publications, as well as trends, to a greater or lesser extent, and rueful about it.

Having to find sponsors, write grant proposals and reports, and account for their funding and spending takes up to as much of the working hours in a given week for some respondents, before they plan a study or plant a seed. This affects library services in several ways:

1. They may feel that they cannot wait for interlibrary loan requests, leading to the use of other articles, and perhaps open access articles, in order to finish a write-up. Therefore, interlibrary loan statistics may not accurately reflect local needs.
2. They want to know and want their graduate students to know more about how to find scholarly materials well, but they may not have time to participate in library-led initiatives, especially those perceived as complex or time-consuming.
3. Collaborations and interdisciplinary topics are driving researchers to consult a wider variety of journals; this may increase the need for new or different journals, for interlibrary loan, or may increase the use of open access journals.
4. The publishing landscape is increasingly complex, which leads to some frustration and confusion among researchers and graduate students. They need more information about some facets of scholarly publishing, such as metrics and evaluation of journals, and to be able to distinguish between open access and open source materials.
5. Respondents commonly publish in core and society journals; some would like to explore publishing in other journals, to find new and bigger audiences. Tenure-track faculty members go in this direction in particular, since metrics such as impact factors or h-indexes are a part of considerations for promotion, tenure and evaluation in some cases.
6. Open access journals are a complicating factor in the evaluation and use of publications. They are not the established favorites of mature researchers, who often submit to journals that they have published in, and that they know, but open access titles frequently offer faster turnaround for peer review and greater availability to readers. Leaving out the potential problems with predatory journals and problematic peer review, open access journals may be beneficial in showing
articles to higher numbers of readers, and to practitioners, agents and farmers who might not otherwise see them. If being read more often translates to more citations and higher h-indexes, then submitting to open access journals will be reinforced. Certainly, we see that their presence and strategies are pushing traditional publishers to make some or all of their content openly available (though often for substantial authors’ fees).

7. Data management and putting data in repositories was one of the topics where respondents were somewhat ambivalent.

a. Those few who spoke of it said that both their own data sets and the data that they used from others could be or have been better cleaned, labeled and refreshed. As with journal articles, more robust descriptions and metadata might make the content more likely to be discovered and used by researchers.

b. Some worried about control of the data if deposited; whether they would relinquish rights to use the data; if they would be recognized for their contributions, and cited, and whether the University would have any stake in the process.

c. Many had not had to deposit data, or had only deposited summary data with articles in certain journals. Those who had not deposited data wondered if it would be worth the time it would cost them to do so.

An issue not library-related, but, like funding struggles, commonly mentioned, was the knowledge gap between researchers and the general public, along with the tendency for public opinion, and legislative action, to be driven by self-proclaimed experts. Technology and data use drives agriculture, but some farmers and the public are not necessarily ready to deal with all of it. The public often fears technologies that they don’t understand, and the discipline and associated industries have not always acted in ways that would reward trust.

• "So one thing that is not in here is...agricultural education...the dissemination of the science of agriculture and ...(W)hat are we doing, for example to... connecting with the public and trying to bridge the knowledge gap or just the understanding gap or
the misconceptions...about agriculture? ...[T]hen a lot of times policies are influenced greatly by public perception and then what we can do with crops, and how we can use technology on crops actually is influenced more by public perception rather than science...” C4

• “I think we are going to get much...more data intensive, and so to get more efficient, to get more yield and to fit resources with potential outcomes and constraints we are going to start doing a lot more data intensive agricultural work. So we are going to do much more intensive water use, or efficient water use...that is definitely one of the challenges in my opinion and then but also better fertilizer management and then better seed selection.... And all of that is going to be extremely data intensive. And how do...you train the next generation to deal with all that data, and how do you, as a producer not make yourself completely dependent on people who know how to do that?” C5

Another issue mentioned, related to research focuses and to funding, was that they are often exploring topics or studying mechanisms that are expected to work, which are mostly incremental in impact, because that is what funding agencies commonly award. There is less opportunity for creative thought, or to try to study topics that would give a breakthrough if successful.

• “Yeah. Again, you know, to develop a fine idea, at least, again I will give you the example of (place) and the (crop) sector. To develop, to get funding for an idea, it has to be, you know, kind of a done deal. I mean, you know, nobody will give you money to just, okay, wander around, trying to see if you can grow ---and you know, the 30 metric ton (crop)....” C15

• “Right, you know... when I was in graduate school, identified a major professor and went to work with him, and basically the first day he said: "Well, have you got any ideas of what you want to work on?" And ....he was like: "Well, what we should do over the next three months, you should read a lot, we should come in and visit once a week and you think about what kind of project you would like to do. You know the kind of work I have done in the past, and there might be a spinoff that you could do,
related to that, or you have some wild idea, ah, we will figure it out." And that is what I did. I think hardly anybody does that anymore." C8

One more common topic which has been alluded to up to this point, is the need to feed the world. This was expressed in various ways by individuals from many departments, and it is the main challenge for Agriculture writ large.

- “I mean Ag is going to continue to try to... feed people with less land but making sure that they fall within either-- they are going to have to get people on board and trust them, you know as far as the technologies that agriculturalists are using; or they are going to have to try and figure out a different way to feed everybody when people are... saying 'but we are hungry and we want it cheap, but we don't want you to make it with your technology. We want you to make it a different way.....’” C5
- “I think that some of the regulations ah, are, on the verge of being silly... when an understanding of the risks that are involved is given... we are talking about global warming from (country), from (crop) producing methane... but what are we going to do for people in (another country)... that are eating that (crop)? You'll say your main goal is to reduce the global warming? or your main goal is to eat? Ah, which is more of a priority for you? I think that those are things..... but I think a more holistic view of why we are here and what we are doing is always a challenge the university faces. Or... in agriculture itself.... The biggest challenge in agriculture for us is, is producing food in the quantity and quality to allow people of both poorest and the richest countries to lead good healthy lives. I think that’s what I’d say are our biggest challenges.” C12
- “... [W]hat do you think is more important, food security or fuel security? That is another issue, right? So, most people, they like to eat. They like to eat, and then... if they don’t have enough fuel to drive, then... you figure something else out.” C7

The respondents wished overwhelmingly for more time and money; a corollary request was that they wished that someone could help complete literature reviews, manage grants, write grant proposals (the ancillary work beyond the original idea) and
take over other complex time-intensive tasks. Assistance with some elements of these, or with data management plans and deposits, might be new directions for local librarians.


Appendix 1

Semi-Structured Interview Guide Questions

Research focus
1. Describe your current research focus and how this focus is situated within the broader agriculture discipline and the academy more broadly. [Probe for whether/not they see themselves as located firmly within agriculture as a discipline or located across/between disciplines]

Research methods
2. What research methods do you currently use to conduct your research?
3. What kinds of data does your research typically elicit?
4. How do you locate the primary and/or secondary source materials you use in your research?
5. Think back to a past or ongoing research project where you faced challenges in the process of conducting the research.
   a. Describe these challenges.
   b. What could have been done to mitigate these challenges?
6. How do you keep up with trends in your field more broadly?

Dissemination Practices
7. Where do you typically publish your research in terms of the kinds of publications and disciplines? How do your publishing practices relate to those typical to your discipline?
8. Have you ever deposited your data or final research products in a repository?
   a. If so, which repositories and what has been your motivations for depositing? (i.e. required, for sharing, investment in open access principles)
   b. If no, why not?

Future and State of the Field
9. What future challenges and opportunities do you see for the broader field of agriculture?
10. If I gave you a magic wand that could help you with your research and publication process – what would you ask it to do?

Follow-up
11. Is there anything else about your experiences as a scholar of agriculture and/or the agriculture discipline that you think it is important for me to know that was not covered in the previous questions?
Dear All:

At Mullins Library, Marei Houpert and I are conducting a study on the research support needs of scholars of agriculture at the University of Arkansas. As a member of the agriculture community here, your participation is crucial to help us develop awareness of gaps and improve the support that we provide for you, your peers and your students.

It’s simple to participate: we need one 60 minute interview (from each respondent) that explores your research process and identifies your ongoing research needs. Your responses will be anonymized; we’d like to take photos to document your research space but no one/no identifying materials will be included in the photos to ensure anonymity. We will record each session, create transcripts, and then destroy the recordings and identifying information on transcripts. The IRB has approved this as an exempt study. We need at least fifteen participants, and we want to schedule the interviews as soon as possible after April 9th, when we get back from required training for the project.

This project is part of a larger group of similar studies being conducted at nineteen US higher education institutions, mostly land grant campuses, and some other institutions. It is exciting for us to take part.

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Ithaka S+R, a not-for-profit research and consulting service, [they produce and provide JSTOR and ArtSTOR] is coordinating the project and writing the final report based on accounts from the separate campuses. The information gathered in this study will be used to write a local report to improve our research support services at the University of Arkansas, and contribute to the aggregated results, which should provide important understanding of the needs of the agriculture community more broadly, something that hasn’t been studied sufficiently. A similar study was done on chemists a few years ago, for reference: http://www.sr.ithaka.org/publications/supporting-the-changing-research-practices-of-chemists/.

Let us know as soon as you can if you are willing to participate and some dates that might work for interviewing. It should be short and sweet.

If you have any questions about the study, please don’t hesitate to contact me, Necia Parker-Gibson here: neciap@uark.edu

Sincerely, Necia
Consent Script for Agriculture

Ithaka S+R study Description of the Study:

This study involves qualitative analyses of the research practices of faculty members in agriculture, to understand the resources and services they need to be successful in their teaching and research. The information will be used to describe and articulate the needs of agriculture scholars (including identifying improvements to pre-existing research support services at the University of Arkansas) and show opportunities for developing new research support services for agriculture.

In addition, this study will add to the knowledge in library and information studies by examining the specific needs of agriculture scholars, a group that has been previously under-represented in that literature.

This study is connected to a suite of parallel studies being developed locally at other US-based higher education institutions with agriculture departments. Ithaka S+R, a not-for-profit research and consulting service, has been hired to provide guidance on research methodology and data analysis, and to pool the results to increase the number of appropriate subjects. The research project as outlined here will be implemented exclusively by the researchers submitting this protocol.

Participation is voluntary, and refusing to participate will not adversely affect any other relationship with the University, the researchers, or the Libraries. Do you wish to participate?

Primary Investigator: Necia Parker-Gibson, MLIS neciap@uark.edu 479-575-8421. Please contact the primary investigator with any questions.

Co-investigator: Marei Houpert, Graduate Student, Mullins Library
If you have questions or concerns about this study, you may contact Necia Parker-Gibson at (479) 575-8421 or by e-mail at neciap@uark.edu. For questions or concerns about your rights as a research participant, please contact Ro Windwalker, the University’s IRB Coordinator, at (479) 575-2208 or by e-mail at irb@uark.edu.

The anonymized aggregated data and analysis will be used towards both a local report and a comprehensive report written and made publically available by Ithaka S+R. Ithaka S+R will not have access to the research subjects or their personal information. Ithaka S+R will only have access to
transcripts, not the audio files. These transcripts will be stripped of
identifiers before they are sent to the Ithaka S+R analyst.

If you agree, you will participate in a one-on-one semi-structured
interview with an investigator listed in this protocol. The interviews will be
60 minutes and take place in your primary work spaces on campus. As
part of the interview process photographs documenting the work space
may also be taken; to maintain anonymity, no humans or identifying
information will be included in the photographs.

Risks and Benefits

There are no known risks associated with participating in this study.
Subjects may experience benefits in the form of increased insight and
awareness into their own research practices and needs.

Compensation

Subjects will not be offered compensation for participating in the study.

Confidentiality

No personally identifiable information will be collected over the course of
the data gathering process. Interview questions will not solicit personally
identifiable information, and photographs of participants’ workspaces will
not include the participants.

Pseudonyms will be immediately applied to the interview transcripts and
the metadata associated with the audio recordings of the interviews,
transcripts and photographs (i.e. labelling on documents). Public reports of
the research findings will invoke the participants by pseudonym and not
provide demographic or contextual information that could be used to re-
identify the participants.

Verbal consent will be obtained in lieu of written consent to decrease the
risk of breach of confidentiality. In order to document consent, we will
record your agreement to participate as part of the audio recording.

Recorded interviews, including the consent to participate, will be stored as
digital audio files by the principal investigator(s) in a non-networked folder
on a password protected computer and these files will be destroyed
following transcription.
Email Recruitment Text

Subject: Invitation to Participate in Study on Research Support for Agriculture Scholars

Dear [First Name]:

The University Libraries is conducting a study on the research support services needs of agriculture scholars at the University of Arkansas. As a member of the agriculture community here, your participation is essential for developing insight into and improving the research support services we provide for you and your peers.

Your participation would entail a 60 minute interview that explores your research process and identifies your ongoing research support service needs. Your responses will be anonymized. We may take photos to document your research space; however, your likeness would not be included in the photos, to ensure your anonymity.

This project is part of a larger suite of similar studies being concurrently conducted at US higher education institutions in conjunction with Ithaka S+R, a not-for-profit research and consulting service that helps academic, cultural, and publishing communities. The information gathered in this study will not only be used to improve the research support services at the University of Arkansas but also towards both a locally published report and submitted for a larger report from the aggregated results that will be written and publically disseminated by Ithaka S+R. This report will provide invaluable insight into the research support services needs of the agriculture community more broadly.

If you have any questions about the study, please don’t hesitate to contact Necia Parker- Gibson at neciap@uark.edu

Sincerely,

Necia Parker-Gibson,
Librarian/Professor
Agriculture Librarian
MEMORANDUM

TO: Necia Parker-Gibson
    Marei Houpert

FROM: Ro Windwalker
      IRB Coordinator

RE: PROJECT MODIFICATION

IRB Protocol #: 16-02-513
Protocol Title: Research Support Services for the Field of Agriculture
Review Type: ☑ EXEMPT □ EXPEDITED □ FULL IRB
Approved Project Period: Start Date: 11/23/2016 Expiration Date: 03/03/2017

Your request to modify the referenced protocol has been approved by the IRB. This protocol is currently approved for 25 total participants. If you wish to make any further modifications in the approved protocol, including enrolling more than this number, you must seek approval prior to implementing those changes. All modifications should be requested in writing (email is acceptable) and must provide sufficient detail to assess the impact of the change.

Please note that this approval does not extend the Approved Project Period. Should you wish to extend your project beyond the current expiration date, you must submit a request for continuation using the UAF IRB form “Continuing Review for IRB Approved Projects.” The request should be sent to the IRB Coordinator, 109 MLKG Building.

For protocols requiring FULL IRB review, please submit your request at least one month prior to the current expiration date. (High-risk protocols may require even more time for approval.) For protocols requiring an EXPEDITED or EXEMPT review, submit your request at least two weeks prior to the current expiration date. Failure to obtain approval for a continuation on or prior to the currently approved expiration date will result in termination of the protocol and you will be required to submit a new protocol to the IRB before continuing the project. Data collected past the protocol expiration date may need to be eliminated from the dataset should you wish to publish. Only data collected under a currently approved protocol can be certified by the IRB for any purpose.

If you have questions or need any assistance from the IRB, please contact me at 109 MLKG Building, 5-2208, or irb@uark.edu.