

# Forage and Grazinglands Extension: Training the Next Generation of Specialists

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**Abstract.** This invited talk provides a perspective on what is required to excel in the role as an Extension Specialist. In the USA, most such Extension Specialists are tenure-track faculty, and have state-wide or even multi-state responsibilities. Advice is given on how to balance the high expectations of such a faculty appointment while providing appropriate recommendations to farmers/ranchers and service providers in the forage and grazinglands industry. This talk will offer one former Extension Specialist's perspective on the skills, experience, and persona required to begin a successful career as a Forage and Grazinglands Extension Specialist. Additional exposition will be given on skills that are harder to learn (e.g., a sense of purpose; passion for farm families, the agricultural community, and land stewardship; self-confidence; balancing work and personal life; etc.). Further, consideration will be given to how such Extension work may be funded in the future, uses ever-evolving communication media appropriately, and adapts to changes in the sophistication of farming/ranching.

## Introduction

The extension of research-based recommendations to practitioners and those that provide services to those practitioners improves agricultural productivity, assists the conservation of natural resources, and supports rural economies. This work is generally referred to simply as “Extension” in the agricultural sector. Extension work is conducted on a variety of scales, including educational efforts on an international, national, state/province, physiographic region, local community, and on-farm/individual level. In the context of forage and grazingland management, extension efforts are generally most effectively implemented at the regional to on-farm/individual level. Those extension efforts benefit greatly from research conducted within the physiographic region or community of the target audience and relevant to the soil types, climatic conditions, and production systems being targeted.

In the USA, Extension Specialists working on the forage and grazingland sector have historically advised or conducted those research trials. Their research and extension efforts have been part of their appointed role as faculty at their state's Land Grant University. Trainings, demonstrations, and troubleshooting advice provided by these state or regional faculty drive forage and grazingland extension efforts.

To have impact and make a meaningful difference to one's clientele, an Extension Specialist in the forage and grazingland sector must be provided multi-disciplinary training, develop a diverse set of skills, and gain experience, preferably under the tutelage of someone who does extension work. An Extension Specialist also needs to become a skilled grant writer so as to obtain funding, as well as conduct and publish novel research in top-tier scientific journals, which is required to get tenure and get promoted. This is not a trivial combination of skills and abilities. Prospective Extension Specialists and the academicians who train them should plan their undergraduate, internship, and graduate training and post-doctoral experiences in a way that fosters these skills and abilities.

## Discussion

Livestock producers that rely on pastures, rangeland, and/or conserved forage as the primary feedstocks need to have in-depth knowledge of several agricultural disciplines. Likewise, Extension Specialists that serve these clientele should, at a minimum, be as familiar with all these disciplines as their clientele and

have a more in-depth understanding of some of those disciplines. Further, the aspiring Extension Specialist would ideally have experiences from which they can draw from to understand the context and consequences of any recommended changes.

### ***Training to build skills and foster experiences***

Specifically, the aspiring Forage and Grazinglands Extension Specialist should have a very detailed understanding of agronomy and animal science principles. Additionally, given the diversity of farm operations, the aspirant should appreciate that the principles may be few, but their applications will be many. In graduate training, their M.S. and/or PhD research project should preferably be one of a very practical nature, ideally with immediate real-world application upon completion. In the aspirant's training, specific emphasis should be placed on the principles of grazing management, hay-making, silage-making, measuring forage nutritive value, categorizing forage quality, ration-balancing, ruminant nutrition, nutrient deficiency symptomology, and animal performance. Whether in their undergraduate classes or graduate training, the aspirant should develop a good understanding of a) soil physical, chemical, and biological impacts on plant growth; b) fertilizing and amending the soil with synthetic and natural additives or manure; c) weed, insect, and disease identification; d) integrated pest management methods/strategies; e) enterprise budgeting and the flow of cash on the livestock enterprises of interest; and f) the sensitivity of these enterprises to the disruptive impacts of input cost fluctuations. The aspirant should also intern or work for an extended period (a minimum of 6 months) on a livestock farm and/or for a company or agency that provides services to such a farm. This would ideally be followed by an internship or work experience with an Extension educator working at the local, regional, or statewide level. Major professors who train prospective Extension Specialists should also ensure that their graduate students learn how to identify prospective grant opportunities, successfully write proposals, manage funds, publish findings in peer-reviewed articles, and report results to the grant-funding entities, just as any prospective academician should be trained.

### ***Understanding the role and responsibilities of publicly funded research***

The aspiring Forage and Grazinglands Extension Specialist should also understand the political nature of their extension efforts. While Extension Specialists should remain apolitical and avoid alignment with a political party or such party's narratives, the nature of science and publicly funded research has elements of politics. In fact, science is steeped in politics. Science is funded, largely, by government funds. Those who anticipate the types of research or research objectives that will receive funds, including understanding how to use the relevant terminology, jargon, and "buzzwords" used in the political discourse, will generally be more successful in obtaining those funds. Successful research and extension work also must maintain ties with five "R's" of the publicly funded research cycle (Fig. 1).



**Figure 1.** The conceptual illustration of the publicly funded research cycle.

First, successful research and extension work must have input and engagement with stakeholders to ensure that the work is relevant to the target audience. Then, the research must be conducted in a way that will provide results that avoid type I and II errors and answer the research questions. These results must then be reported upon to peers who will review the validity of the methods and conclusions, then to the target audience, and to the funding agency. The next step is to ensure that the impacts of the practice change are quantified so that one can answer the question “what difference did that make?” With a positive return on investment, the clientele/stakeholders build trust with the Extension Specialist and other Extension educators who assist in disseminating the information about the practice change. It is with the development of trust that relationships are built. Building relationships is the keystone of the whole cycle, as it is then that the Extension Specialist can dialog with the clientele to identify the next research and/or extension need, ensuring relevance of the work. Thus, the publicly funded research cycle continues.

### ***Accepting the persona and marketing one’s extension efforts***

As relationships develop with the clientele, a successful Extension Specialist will accept or lean into the reputation by which they become known. There is actual considerable value by accepting this reputation and building it into a persona. Some Extension Specialists become known for specific research and extension topics on which they focus, develop certain phrases they are known to oft repeat to reinforce the message, and this, then, becomes a sort of “brand” for the person or part of the persona they take on as being memorable. For example, a Forage Extension Specialist focused on grazing may promote the idea of leaving greater residual forage in a rotationally grazed paddock as this results in greater regrowth rates. Soon, his oft repeated and memorable phrase that “grass grows grass” becomes a familiar refrain to those who regularly attend the Specialist’s meetings. So, if the Specialist has a relationship with his clientele, they may start to joke with him about how frequent the phrase is repeated and they start calling him “The Grassman.” A great approach to build rapport with his clientele is to accept and lean into it, ensuring that that “catch phrase” and the persona of the “The Grassman” begins to build a brand. Extension services, like any other product or service, is most successful when well marketed. Ideally, one brands the program, develops a logo, provides additional information on a website, engages in social media campaigns, and uses the persona to gain visibility. Like other marketing efforts, the best advertising is word of mouth, so using one’s persona to sustain and build new relationships is crucial.

### ***Cultivating a sense of purpose***

Taking on a successful Extension Specialist’s persona must be rooted in a passion for one’s work. Extension workers often talk about the “missionary zeal” that drives and sustains them. Extension workers devote a tremendous amount of time, intellectual energy, and even blood, sweat, and tears to their efforts. And, frankly, they do this work for compensation that is 50-80% of what similarly trained professionals in the industry may make. As a result, an Extension Specialist must be driven by a personal mission to serve their clientele, affect positive changes in the industry, and the hope that, at the end of one’s career, they fulfilled their purpose in life. Successful Extension Specialists are motivated by a passion for their clientele friends and farm families, the agricultural community, a sense of responsibility for land stewardship, or other altruistic motives. It is a useful exercise for an aspiring Extension Specialist to give extensive thought to their own personal mission statement, write it out, keep it in a personal file, revisit it often throughout their career, revise it if needed, and use it to validate career decisions.

### ***Combating the “Impostor Phenomenon”***

A risk associated with accepting a role as an Extension Specialist, particularly when one is driven by a passion to be helpful, is that they may not be able to help. Sometimes, it is a matter of telling them “I don’t know, but I know someone who does” and helping them connect with the person who can help. One

must accept that there will be questions that they do not know the answer to or that may even be impossible to answer. This can be humbling and, at times, may lead to humiliating experiences. Yet, one must grant themselves grace, use the opportunity to learn, and move on. The role of “expert” is stressful when one is expected to know. No one has all the answers and, if one ever thinks they do, they may be headed for disaster.

Along with the responsibility to develop recommendations that positively change clientele(s)’s operation(s), the Extension role comes with the burden of knowing the implications of implementation (e.g., higher costs, causing the producers to assume debt, risks posed to farm income, etc.). Knowing that some clients may literally be betting the farm on the advice one is providing can be heavy. Self-doubt and a lack of confidence can be paralyzing. Despite the advanced degrees, experience, and even prior successes in the position, some may constantly downplay their achievements, feel like a fraud, and worry that their incompetence will be uncovered. These feelings are known to behavioral scientists as the impostor phenomenon (Sakulku, 2011), and it is quite common among high achieving professionals. If unaware they suffer from this syndrome, one may attempt to combat these feelings by working harder, spending longer hours on the job, and holding oneself to ever higher standards. Impostorism and the resulting pressure one puts on themselves can lead to burnout, reduce performance, and threaten one’s mental health.

### ***Balancing work and personal life***

Serving as a Forage and Grazinglands Extension Specialist requires one to work when your clientele have time to participate. In many areas, livestock producers that rely on pastures, rangeland, and/or conserved forage cannot derive enough income from that work to support a family without off-farm employment. So, extension work for those clientele may necessitate convening trainings, setting up field days, or meeting for consultations on nights and weekends. Proactive planning to avoid conflicts (to the degree possible) between work and family events is crucial to maintaining balance between work and personal life. Ideally, one should limit the number of events on weeknights and, especially, weekends. Holding certain days of the month or planning regular gaps in one’s schedule to allow for family time is highly advisable. Planning date nights on weekends, lunch dates on weekdays, family outings, vacations, and other preplanned activities is crucial to ensuring a work-life balance, as well as preserving one’s own mental health. Be assured that it is extremely rare that clientele will question one that prioritizes family time. If they do, their opinion is unimportant.

### **Conclusions**

A career as an Extension Specialist is highly-rewarding, despite the gravity of the recommendations one makes to their clientele and the stresses of pursuing promotion and tenure as a faculty member at a major university. The impact one can have on the clientele they serve and the relationships they build along the way makes the effort worth it, so long as one does not sacrifice their health or have a lopsided work-life balance.

### **References**

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