Science Societies

Ten tips for grant planning

By Matt Yost Assistant Professor and Agroclimate extension specialist, Utah State University

October 27, 2021

Source: Adobe Stock/Olivier Le Moal.

Source: Adobe Stock/Olivier Le Moal.

Grant writing comes in many forms and is usually a part of almost every scientist's job description. It includes the traditional state, federal, and non-profit grants but also involves writing CRIS[1] project proposals, contracts between private companies and institutions, and other related scientific endeavors. Most agencies and universities offer periodic grant-writing tips and workshops for their employees. Many of these focus on writing techniques, grant requirements, and strategies for exciting and appeasing reviewers. I would like to focus on 10 tips for grant planning that do not get discussed very often but will hopefully help as you plan research, teaching, and extension programs and grants.

1. Connect the Dots

Most scientists serve as principal investigator (PI) and co-PI for a large variety of research, teaching, and extension endeavors. Where possible, it is wise to select a handful of major “connected” themes that all your efforts can center on. Pieces of your themes can then be incorporated into every grant-related effort you pursue. Not only does this make it easier to document your impacts, but it also helps boost your efficiency and synergy, improve your ability to leverage efforts, and enhance your legacy on the industry.

2. Be Creative

Sometimes scientists get into a rut of working with the same people on similar ideas year after year. Do not forget to always think outside the box. This could mean applying for grants that you normally would not apply for or working with new expertise (social scientists, engineers, natural resource scientists, economists, education, industry, etc.) to expand your horizons.

3. Design Field Trials with a Future Split in Mind

For those conducting field research, it can be extremely frustrating when you run out of space to conduct a new trial within an existing trial. Thus, a good rule of thumb for grant planning is to always design a bit large from the beginning and plan to split plots for additional treatments. This could add some extra cost (e.g., land rental fees, production costs, etc.), so be mindful, respectful, and appropriate in your funding request. However, creating slightly larger plots that could be split in half often adds minimal costs. Designing large allows you to leverage trials when pursuing other grants. In the end, this likely saves grant agencies money because the same land can be utilized for several projects, and the synergy reduces overall costs for everyone involved.

4. Leverage Investments

Leverage usually simplifies a task and provides a new advantage. This is certainly true in grant planning and applications. When you follow Tip 1 to connect the dots, it becomes easier to leverage existing efforts to plan and propose new grants. This allows you to accomplish more because it requires less initial thrust and re-training when you build off existing efforts. Demonstrate and use the leverage language in proposals. Most funding organizations like to see that other organizations and stakeholders have or are investing in your ideas. Remember to avoid “double-dipping” or requesting different funding for the same tasks.

5. Diversify Your Portfolio

There is a large diversity of opportunities for local, state, regional, federal, and international funding to support your scientific efforts. Explore many avenues, even ones that you would not normally pursue. Garnering support from local stakeholders (e.g., soil conservation districts, water conservancy districts, commodity groups, environmental groups, NGO's, businesses, etc.) ensures that the research remains locally relevant and provides excellent justification and leverage (Tip 4) for larger grant programs.

6. Mind the Indirect Costs

Learning the difference between indirect and direct costs is a must when grant planning. Indirect costs (also known as overhead, facilities and administration [F&A)], etc.) vary widely among grant programs—including allowed amounts and other restrictions. Most institutions that receive grants also have a maximum allowable indirect cost limit. Many of these limits are approaching 50%. This means that only half the funding you receive will go towards direct project costs. Hence, ensure that the direct funding is sufficient to accomplish the work proposed in the grant. Large grants

are appealing, but high indirect costs can sometimes limit operating funds. For example, a $100,000 grant with 10% indirect leaves $90,000 for operating. A $500,000 grant with 50% indirect split over two institutions leaves $125,000 per institution (likely even less because additional indirect costs are often charged on subawards).

7. Be Selective

Some scientists (especially early career scientists) feel compelled to participate in every grant they are invited to co-PI. Honestly ask yourself these questions (no particular order) as you decide whether to participate in a grant:

- Does the proposal support my themes (see Tip 1)?
- Am I excited about the ideas?
- Would I fund the project?
- Do I work well with other PIs on the team?
- Is the PI responsive to my ideas and reasonable/enjoyable to work with?
- Can I confidently complete my aspect of the work in the allowed time frame?
- Is there enough budget to adequately support my portion of the work?

Remember that it is okay to gracefully step away from a proposal team if you have major concerns with any of the questions above. Do your homework on the team in advance if you are unfamiliar. If the PI or other team members have a bad reputation of being difficult to work with, do not feel compelled to participate.

8. Budget Appropriately for Your Time

It can be tempting to reduce what you charge for your salary to enhance the operating, travel, or other direct cost categories that are often limited. If salary is needed, always charge the appropriate amounts based on the actual time and effort

expended on the project as often as possible. If a grant or contract does not specify whether salary is allowed, always be sure to ask if it would be allowed.

9. Mind Politics

Grant writing is about more than just receiving funding to complete your scientific pursuits. It also influences your professional network and reputation. There are some organizations that are essential to maintain positive working relationships with. Some of the organizations (usually local, state, and regional) may offer small grants with low direct funding and high expectations and reporting requirements. While these may not be as appealing as larger grants, be sure to focus on your key stakeholders and ensure they are happy with your work. This might require some sacrifice. Remember though that these smaller grants can be used to help leverage larger grants.

10. Learn from Failures

This is a common tip you hear in many grant-writing workshops. It is helpful to realize upfront that a significant portion of your grants likely will not be funded. Rather than becoming bitter or depressed about rejections, it is wise to thoroughly read and utilize the feedback that you receive to resubmit or re-define the next round of proposals. Further, explore other opportunities for rejected proposals—many of them might make excellent foundations for future proposals, extension articles, opinion pieces, and/or literature review papers. You might also be able to downsize the work and create smaller projects for graduate and undergraduate students to pursue or share the proposal with a colleague who could benefit from your foundation.

> This column is brought to you by the Early Career Members Committee (ECMC), which serves members beginning their careers—new professionals and graduate

students in agronomy, crop, soil, and environmental sciences. The ECMC consists of members from each of the three Societies who serve three-year terms. Learn more at www.crops.org/membership/early-career.

More news & perspectives

Back to issue

Back to home
