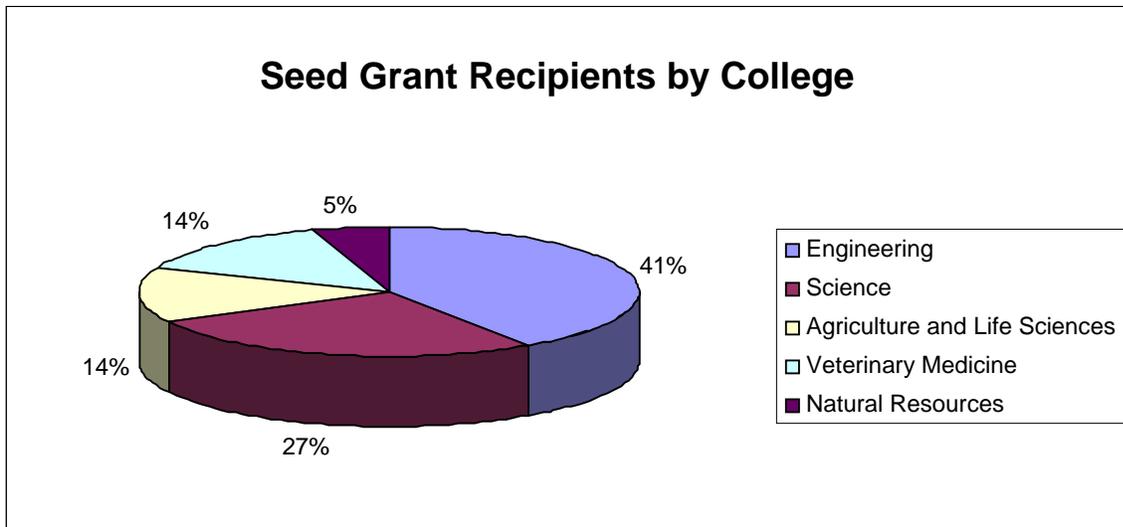


**AdvanceVT Seed Grants  
Summative Assessment  
September 2010**

*AdvanceVT* research seed grants provided funding to support pre-tenure, tenure-track women faculty in developing successful proposals for external grant funding. In addition to research equipment and supplies, seed grants provided travel funds to visit colleagues at other universities and funds to support graduate students to help acquire data needed to write more competitive proposals. Although the dollar amount of the seed grant awards varied, recipients received an average of \$10,000 from *AdvanceVT* that was matched by their respective college and/or department.

**Seed Grant Recipients**

In keeping with *AdvanceVT's* focus on advancing the careers of women in academic science and engineering careers, junior women faculty in the Colleges of Science, Engineering, Agriculture & Life Sciences, Natural Resources, and Veterinary Medicine were eligible to submit seed grant proposals. Recipients were selected via a competitive process by an interdisciplinary committee with representatives from multiple academic colleges. Over a four-year period, 69 seed grant applications were received and 22 grants were awarded. Recipients represented all five of the eligible academic colleges. As indicated below, the majority of grant recipients came from the Colleges of Engineering (41%) and Science (27%).



<b>Seed Grant Recipients, by Year</b>			
2004-2005	2005-2006	2006-2007	2007-2008
5	5	6	6

## Assessment Activities

Assessment activities varied by grant year and consisted of both written evaluations and individual interviews. These assessment activities were designed to yield information on the impact of the seed grants on recipients' research and career progression, and to obtain feedback on how the program could be improved. All recipients were asked to complete and submit written evaluations of the program. In addition, interviews were conducted with the first two cohorts of grant recipients (2004-2005 and 2005-2006 recipients) during the spring 2006 semester, and later with two members of the third cohort (2006-2007 recipients), for a total of 12 interviews.

Members of the third cohort (2006-2007 recipients) were asked to complete both a written survey in May 2007 regarding their activities related to the seed grants, and a standardized written evaluation in May 2008. This was in recognition that many of the desired outcomes of the seed grants (e.g., externally funded grant proposals and publications) frequently occur over a period of years rather than a period of months. Thus, even though some type of written evaluation was received from 18 of the 22 grant recipients, these documents most likely do not capture the full range of professional activities related to the seed grants. For example, a journal article related to a 2004-2005 seed grant was not published until 2009, three years after the recipient was interviewed. In the absence of updated reports from the majority of seed grant recipients, it is difficult to assess the longitudinal impact of the seed grants. However, the information obtained illustrates several common themes that show how the *AdvanceVT* seed grants impacted recipients' research and career progression.

## Seed Grant Outcomes

The preparation of proposals for external funding was stated in recipients' seed grant proposals as a major goal of the program. All but two of the recipients who participated in seed grant assessment activities reported preparing proposals for external funding. At least 10 seed grant recipients were successful in obtaining grant funding at the time of their written evaluations. Funded proposals included multi-year awards from NSF, NIH, and USDA, as well as NSF CAREER Awards.

*“As the seed grant directly contributed to my successful NSF CAREER proposal, it has played a critical role in my development of the centerpiece of my research agenda. The seed grant allowed me to rent equipment and support a graduate student who used it to obtain preliminary results for the proposal that undoubtedly improved its competitiveness.” – Seed Grant Recipient*

The seed grant recipients also noted in their original proposals the importance of attracting high quality graduate and undergraduate students to support research goals. All but one of the recipients who submitted a written evaluation listed a graduate student, postdoctoral associate, or undergraduate student who supported fieldwork, lab research, or outreach programs under the seed grant. Some seed grant recipients were able to provide partial support for multiple students. Several of the students listed conducted research for their degrees that was related to the research supported by the grants. Thus, not only did seed grant funding provide new opportunities for the

pre-tenure faculty recipients, but opportunities to train future faculty members. Multiple recipients commented that the students they had attracted were women and members of underrepresented groups. As a result, the seed grants were able to help advance the careers of both women faculty and students.

*“The single greatest benefit of the AdvanceVT seed grant on my research program was allowing me to recruit an additional talented graduate student. With a young research program, my earliest source of funding was ITAR restricted. The funds from AdvanceVT allowed me to hire a non-US national student who I otherwise would have been unable to support. She has done excellent work and made good progress towards her Ph.D. In fact, I expect she will be my first student to complete her Ph.D.” – Seed Grant Recipient*

Seed grant funding also helped facilitate research collaborations. At least 15 of the 22 seed grant recipients were able to develop new relationships with colleagues during their award periods. While several recipients reported developing interdisciplinary collaborations across the university, others reported developing cooperative arrangements with faculty at other universities, both nationally and internationally, and with key figures at national laboratories.

*“The seed grant allowed me to gain new knowledge and make a contact that I would not have had otherwise.” – Seed Grant Recipient*

In their original seed grant proposals, most recipients stated as a goal the production of publications, presentations, and/or instructional activities in order to raise the profile of the faculty member both on campus and in their field of study. All but one of the seed grant recipients who participated in assessment activities reported presenting at conferences, producing journal publications, and/or participating in outreach in their research area. Graduate and undergraduate students funded under the grants were instrumental in these efforts and were often listed as first or second author on related publications and presentations.

*“I feel that my profile as a ... scientist has been raised in part due to this award.” – Seed Grant Recipient*

Several of the seed grant recipients highlighted travel as a key to their success. The funds provided by the seed grants facilitated recipient travel to conferences and to develop collaborative efforts and conduct fieldwork. Grant funds were also used to support student travel.

An unexpected benefit of the seed grants was that for some participants, receiving the grant helped boost their confidence as new professionals in academe.

*“The ADVANCE seed grant was my first successful proposal, following a string of 10 consecutive rejections. Receiving it helped bolster my sagging confidence, when I felt nearly ready to give up on an academic career. My next six proposals were all funded!” – Seed Grant Recipient*

A few participants also reported that they had benefited from the networking aspect of the seed grant program.

*“One pleasurable outcome of receiving the ADVANCE award is that I got to meet other recipients, both during my year, as well as those before and after. I enjoyed meeting and talking with this group of female assistant professors from other departments from a social perspective as well as from a professional perspective, as there were several recipients with whom I share research interests.” – Seed Grant Recipient*

In general, seed grant recipients reported that the seed grant program had met their expectations. Many participants indicated that the seed grant money had allowed them to learn a new skill or tool and to better understand their area of interest. Many participants also expressed the belief that seed grants offered more than financial benefits. Multiple recipients shared during interviews that receiving the seed grant had made them feel that their research was valued and important. This message was also relayed to their graduate students. The following comments regarding the impact of the *AdvanceVT* seed grants are representative of the group of awardees.

*“Receiving the AdvanceVT grant increased my confidence, my competitiveness, and helped me launch two important research directions.” – Seed Grant Recipient*

*“In summary, the Advance seed grant was very helpful in launching my research program and getting federal grant funding.” – Seed Grant Recipient*

*“The seed grant was extremely valuable in recruiting two talented women graduate students. Additionally, the grant allowed me to explore a new research area that shows tremendous promise for the future.” – Seed Grant Recipient*

*“It definitely provided me with funding during a critical time in my career and helped bridge between my start-up funding and the time when I finally got an NSF grant funded.” – Seed Grant Recipient*

*“[The] grant has provided me with an excellent opportunity to step into an area of research interest for me and develop some contacts.” – Seed Grant Recipient*

*“The seed grant program gave me a leg up that I would not have had otherwise.” – Seed Grant Recipient*

In terms of how the seed grant program could be improved for the future, recipients offered the following suggestions:

- Provide money for a second year or reward one recipient for her year of success.
- Meet with other grant participants during the year and/or at the end of the year.
- Create a fund for entering doctoral students.
- Monitor the research and provide assistance or feedback.
- Allow for more flexibility in spending the money (e.g., create an option to spread the award out over two years).
- Get more practical advice after receiving the grant.
- Publicize seed grant progress throughout the year.

- Give everyone the same amount of award money to ensure equity.

As of September 2010, seed grant recipients had fared well in the university promotion and tenure process. Ten seed grant recipients had received tenure and were still at Virginia Tech; one seed grant recipient had received tenure and left Virginia Tech; one recipient was denied tenure; eight recipients were still at Virginia Tech but had not yet reached their tenure review dates; and two recipients had left Virginia Tech prior to their tenure review dates. Of the 22 women faculty receiving *AdvanceVT* seed grants, five were successful in securing NSF CAREER Awards.