

EVALUATION OF RESEARCH PROGRAM AND PUBLICATIONS IN IFAS

An Implementation Plan Using Input from Faculty Discussions of Task Force Report

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Guiding Principles for Evaluating Research Program and Publication Quality in IFAS.

Faculty, their appointments and programs are highly diverse. Therefore, use of the guide must consider each faculty member's specific assignment and sub-discipline when applying the six major questions in the subsequent pages in this document, and weigh specific measures in a manner that makes sense in regard to the individual's role within IFAS. For example, under the general category of research dissemination, mass media releases may be a critical evaluative measure for certain faculty but of no importance for others. No single measure is suitable for evaluating programs and publications, so the six identified questions include 29 elements important in the evaluative process. Because of the prominence of publications and stakeholder and peer impacts, additional tools were developed adapting existing, emerging and increasing used measures by faculty to provide a uniform approach for faculty to present their accomplishments relative to their area specific discipline, assignment, and set of peers.

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Suggestions for Using the Research Quality/Impact Guidelines

1. The Task Force strongly recommends that the full set of criteria in the attached checklist be used when assessing the quality and impact of research programs in UF/IFAS. Overemphasis on any single criterion, such as journal Impact Factor, will not provide a comprehensive assessment of the research program. Further, while all research programs are expected to be of high quality, an evaluation of the scope, quality, and impact of a faculty member's research program must consider the magnitude of the faculty member's research appointment.
2. The guidelines developed by the Task Force include six major dimensions of research quality and impact, stated in question form and followed by their respective components. A performance rating may be assigned to each major dimension, with space provided for adding notes and observations about each component.
3. The Task Force feels that the six bold questions in the guidelines provide a sound basis for comprehensive and complete planning and evaluation of a research program.
4. These guidelines are a useful tool for new faculty members, in particular, as they plan and implement their research programs. As such, unit leaders, mentoring committees, and others are encouraged to use the guidelines as the framework for discussing research program expectations. Faculty members may use the guidelines on a periodic basis to assess progress and identify areas of improvement.
5. Unit leaders may ask faculty members to use these guidelines to complete a self-review of their research programs prior to annual performance evaluations. These guidelines may also be used to assess the quality and impact of research programs at formal progress checkpoints, including annual performance evaluations, Tenure Progress Assessment (third-year review), tenure and promotion, promotion to professor, and the Salary Step Plan for professors.
6. We recommend that the checklist of research program guidelines **REPLACE** the existing checklist of criteria on the IFAS annual faculty evaluation form.

Guidelines for Assessing the Quality and Impact of Research in IFAS

Evaluate each item within the six major dimensions relative to the expectations of faculty in the discipline. For example extramural funds adequate to a social scientist may not be so for a molecular biologist. Similarly some faculty are expected to produce cultivars, plant patents and other patentable products while others are not.

_____ Is the current research effort integrated within a long-term research program?	
Identification and context of problem(s)	
Clearly identified target audiences and/or clientele	
Short-term and long-term goals, objectives, and strategies	
Well-focused research program with a clearly articulated vision for the future	
_____ Does the research program demonstrate collaboration and cooperation?	
Interdisciplinary partnerships and joint publications	
Regional, national, and/or international research teams (where applicable)	
Clientele, industry, government agencies, NGOs (where applicable)	
Sustained involvement of undergraduate and graduate students in research, grant writing and publishing	
_____ Is the research program enhanced through extramural support?	
Overall pattern of sustained extramural support	
Continuing, new, and pending funding awards	
In-kind contributions	
Graduate students and postdoctoral associates on extramural support	
_____ Was the research disseminated to the profession?	
Sustained focus in research publications and presentations	

Refereed journal articles	
Published works cited	
Publication outlets and typical acceptance rates	
Impact factor of journals, if available, and/or other journal quality indicators	
Conference papers and presentations	
_____ Was the research disseminated to stakeholder groups?	
Overall pattern of sustained dissemination efforts to stakeholders	
Educational programs	
Trials and demonstrations	
Trade journal articles	
Mass media releases	
Electronic products	
Books, manuals, and other print formats	
_____ Did the research generate new knowledge and/or lead to changes in practice?	
Overall contributions to science/knowledge in the academic discipline(s)	
Intellectual property, including patents, copyrighted material, or new varieties or modified organisms--pending, approved, commercialized	
Peer evaluations of knowledge generated and stakeholder benefits	
Awards and recognitions	

Table 1. A matrix for developing a **publication profile** for a faculty member in IFAS. (Note: this deals only with publications. See stakeholder impact in order to evaluate potential “real world” impact of research). Searchable publications refer to those that can be electronically searched in a database and cross-referenced with other articles that have cited the work. There is no modal publication profile. The profile should fit the job description of the faculty member and be justified by the faculty member and unit administrator. The time frame for summarizing the information outlined in this table depends on reason for which it is being used.

Faculty Member Name:		Research FTE:						
Searchable, Referred Journal Publications		Unsearchable, Referred Journal Publications	Non-refereed Journal Publications	Book Chapters, Symposium Chapters	Books Edited	Books Written	Other	
<u>IFAS Faculty Member</u>	<u>⁵Group of Selected Peers</u>							
<i>Faculty Member Citations</i>	<i>Peers Citations</i>							
¹ # publications/y	# Citations/publication	# publications/y	# publications/y	# publications/y	# publications/y	# publications/y	# publications/y	
² publications in high IF journals/y	# Citations/publication	# publications/y	# publications/y					
# publications in medium IF journals/y	Citations/publication	# publications/y	# publications/y					
# publications in low IF journal/y	Citations/publication	# publications/y	# publications/y					
³ h-index	h-index							
⁴ Peer review		Peer review	Peer review					

Table 1. Footnotes

¹ Publications per year is the total number of publications in a defined time period divided by the number of years evaluated. These numbers should be interpreted in comparison to peers in the same field/subfield. This will require research by the faculty member with the guidance of the unit administrator.

² Journals in research disciplines or sub-disciplines should be broken into high, medium and low IF using the top third of the journals as high, middle third as medium and final third as low. The absolute value of the IF and the absolute value of the range of IF of the journals in one's field/subfield have NO interpretation on their own. They are merely an index of the range of IFs that occur in that field/subfield. If a faculty member works in more than one field/subfield, the journals in each field can be ranked into top, middle and bottom thirds (even if they cover a different range) and the profiles of publications combined together.

³ This is not h-index/year as has been suggested in some publications. The problem with h-index/year is that if a new person publishes 1 paper the first year out and it is cited once, then they have an h-value of 1. This is the same as a scientist with a 20 year career and an h-index of 20 which means 20 publications that have over 20 citations per paper. An h-index can be calculated manually or at Web of Science (<http://portal.isiknowledge.com/portal.cgi?DestApp=WOS&Func=Frame>) that can be reached through the UF library websites. It can also be calculated using free software (Publish or Perish) that can be found at <http://www.harzing.com/resources.htm#pop.htm>.

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⁴ Peer review refers to sending a set of articles to one's peers (colleagues working in the same field) for their interpretation of the impact and/or quality of the work relative to the research field.

⁵ The Group of Selected Peers" section of this table is based on selected 5 peers in the same field, or more specifically subfield, in the same stage of career. The metrics used in these columns are the mean value of those 5 peers. The purpose is to develop a similar profile in order to compare the individual with his/her peers. The selection of peers should be done in concert with the unit administrator in order to better understand what that comparison reflects.

⁶ Citations per publication is the total number of citations for all publications for a specific time period divided by the number of papers published in that time period.

WE BELIEVE CRITERIA FOR EVALUATION OF RESEARCH QUALITY AND IMPACT SHOULD BE TESTED THOROUGHLY ON TEST POPULATIONS THAT REPRESENT WIDE RANGING DISCIPLINES.

STAKEHOLDER AND PEER INPUT AND IMPACT

STAKEHOLDERS. The land grant mission established two primary sets of stakeholders—those concerned with the contributions to science and those concerned with the economic, practice and/or policy changes associated with the resource, commodity or enterprise. The science impact is integral to the peer review process and the metrics applied to publications as reflected in the profile and the external peer assessments of specific publications and program accomplishments noted elsewhere. For the latter (resource, commodity or enterprise) stakeholders, it is recommended:

1. The chair and center director (where appropriate) working with the faculty member establish an appropriate framework for assessing economic, practice or policy changes resulting from the research.
2. The process should attempt to identify transformation changes resulting from new cultivars, patents, software, hardware, field practice or new policies substantially facilitated by the research, with special attention to measurable economic impact, environmental enhancement or value added to the enterprise.
3. Such information may come from surveys or interviews with stakeholders groups or individuals and from peers or enterprise analysts closely related to the field of work.

PEERS. Peer review in this context provides the overall assessment of the faculty member's research on the discipline. This assessment is done by the chair and center director (as appropriate) who solicits and summarizes the input. It is recommended that:

1. The chair working with the faculty member and senior faculty in the unit identify those peers most qualified to evaluate the work. Telephone contact by the chair to confirm their availability and willingness to conduct the review and an acknowledgement and thank you letter after the review are recommended
2. A letter with standardized content across units is sent that contains information on the faculty member's appointment and responsibilities and the university criteria and expectations; and solicits input on the faculty member's scholarly excellence and creativity, distinction in two areas of the land grant missions, leadership, and potential for continuing high level of accomplishment.
3. The letter to include at least three of the papers chosen by the faculty member as his/her most important works with a request that they be evaluated relative to their contributions to the field of study and/or benefits to the enterprise the work supports.

CHAIR LETTER. The chair's letter is the focal point of the overall assessment of the faculty member by synthesizing stakeholder and peer input. This letter addresses:

1. The information assembled from stakeholders on impacts and from peers on scientific quality. It summarize the impact on science including development of intellectual capital by mentoring graduate students and

post-docs and the impacts on the agricultural, natural and human resource that the work supports.

2. Both positive and negative issues raised by the peer reviewers by placing them in the broader context of program performance measures.
3. Quality of the journals in which the faculty member publishes and metrics appropriate to them in the context of the discipline or sub-discipline.