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Commentary

Suggested strategies to attract reviewers for *Soil & Tillage Research* submissions

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My recent letter to the Editor entitled "The Author's Opportunity & Obligation" discussed a major problem being faced by the editors of *Soil & Tillage Research* (STILL) and many other journals – specifically obtaining reviews for manuscripts that have been submitted for publication. The letter stressed to members of the International Soil & Tillage Research Organization (ISTRO) that the opportunity to publish research results and interpretations in STILL, an internationally recognized journal that was conceived by ISTRO founders and established in cooperation with Elsevier, carries with it an obligation to more actively assist in the entire review process. The letter also challenged all ISTRO members to review two manuscripts per year and an additional two for every one submitted to STILL. Doing so would provide a reviewer pool for at least 900 manuscripts and help solve the problem being faced by STILL editors.

During the review phase for that letter, I was asked to provide additional suggestions for helping to solve the reviewer problem for STILL. My objective for this contribution is to offer several suggestions for the publisher, Editors, Editorial Board members, and ISTRO members to consider as potential reasons for the problem and strategies to address it. To continue this dialog, I also challenge ISTRO members and others to consider and hopefully respond to these suggestions through additional Letters to the Editor in STILL or the organization's newsletter (ISTRO-INFO) which can be accessed through the ISTRO website www.ISTRO.org.

To help ISTRO members understand the problem being faced by the five STILL Editors, I will begin by reviewing their workload. According to a September 2013 Elsevier report to the ISTRO Board, manuscript submissions for 2009–2013 were 387, 352, 453, 510, and 609, respectively. That means that each editor must handle between 80 and 100 manuscripts per year. Assuming a high quality peer review process should involve a minimum of two to three external reviews, simple mathematics shows that collectively, the STILL Editors theoretically need between 800 and 1500 reviews per year. In reality the number or required reviews is less than this because many manuscripts are rejected immediately in what is termed a "desk rejection" made at the discretion of each editor.

Suggestion 1 – the ISTRO Board and Elsevier should review both the number and topics for which STILL submissions are being received. This is important because when STILL was established in 1981, there were fewer international soil science journals, there was less pressure on scientists and engineers to publish, and there were fewer international tillage-oriented research programs in Argentina, Brazil, China, India, Iran and many other countries from which agronomists, engineers, and soil scientists are now seeking to publish their research results in international journals.

During the past few years, the number of Editors commissioned by Elsevier for STILL has been increased from four to five to keep the individual workload manageable. Therefore, I will assume that Elsevier considers the number of submissions that each editor is expected to handle to be appropriate.

To further examine the list of topics for which manuscripts are being submitted, I will begin by reviewing the Aims and Scope (A&S) for STILL as given on the Elsevier website www.journals.elsevier.com/soil-and-tillage-research. The A&S statement confirms that STILL is published in collaboration with the ISTRO and that the journal examines physical, chemical and biological changes in the soil caused by tillage and field traffic. It continues stating that manuscripts will be considered on aspects of soil science, physics technology, mechanization, and finally applied engineering for a sustainable balance among productivity, environmental quality and profitability. The A&S statement then provides several examples as being suitable topics within the scope of STILL. These include:

- agricultural and biosystems engineering associated with tillage (including no-tillage, reduced-tillage and direct drilling).
- irrigation and drainage; crops and crop rotations; fertilization.
- rehabilitation of mine spoils and processes used to modify soils.
- Soil change effects on:
  - establishment and yield of crops
  - growth of plants and roots
  - structure and erosion of soil
  - cycling of carbon and nutrients

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- greenhouse gas emissions
- leaching, runoff and other processes that affect environmental quality.

The acceptable topics list continues with:

- characterization or modeling of tillage and field traffic responses
- soil, climate, or topographic effects
- soil deformation processes
- tillage tools, traction devices
- energy requirements, economics
- surface and subsurface water quality effects
- tillage effects on weed, pest and disease control, and their interactions.

This is indeed a broad and comprehensive list of soil related topics, but in general, based on the society's broad membership, there should be qualified ISTRO scientists and engineers who could step forward and provide appropriate reviews for these submissions.

The 2013 Elsevier report to the ISTRO Board stated that the target audience for STILL consists of Soil Scientists, Agricultural Engineers, Agronomists, Weed Specialists, and Soil Conservationists. It also states that authors are encouraged to submit manuscripts addressing any of nine themes:

- Soils and Environment
- Agronomy and Crop Science
- Irrigation and Drainage
- Soil Biology
- Soil Mechanics
- Soils Chemistry
- Physics and Mineralogy
- Terramechanics
- Terrestrial Ecology.

Currently, accepted manuscripts are eventually grouped in the journal under one of six themes:

- Crops and Crop Interactions
- Soil Biology
- Soil Hydrology and Structure
- Soil Mechanical Properties
- Soil Physical Chemistry
- Other.

The subtle differences in the S&A topic list and the two theme lists given in the Board report suggest that as the topics for which STILL submissions are encouraged is reviewed by both Elsevier and the ISTRO Board, it may be beneficial to make these three lists more consistent. It should also be made very clear that the scope of *Soil & Tillage Research* is on "soil AND tillage" rather than "soil OR tillage."

Providing clear guidelines for the type submissions that are most appropriate for STILL, and thus the topics and number of reviews needed, appears to be consistent with the five other Elsevier soil journals participating in the trial review and manuscript transfer project (http://www.journals.elsevier.com/soil-and-tillage-research/policies-and-guidelines/publishers-note-oct2013/) with STLL. Those five journals as well as the *Journal of Terramechanics* all appear to be more narrowly focused than STILL. For example:

- *Geoderma* – particularly welcomes interdisciplinary work focusing on dynamic soil processes and their occurrence in space and time
- Agriculture Ecosystems and Environment – focuses on the interface between agroecosystems and the natural environment, specifically how agriculture influences the environment and how changes in that environment impact agroecosystems
- *Applied Soil Ecology* – addresses the role of soil organisms and their interactions in relation to agricultural productivity, nutrient cycling and other soil processes, the maintenance of soil structure and fertility, the impact of human activities and xenobiotics on soil ecosystems and biological or technological control of soil-inhabiting pests, diseases and weeds
- *Catena* – focuses on original field and laboratory investigations and reviews on geoecology and landscape evolution with an emphasis on interdisciplinary aspects of soil science, hydrology and geomorphology
- *The European Journal of Soil Biology* – focuses on all aspects of soil biology dealing with microbial and faunal ecology and activity in soils as well as natural ecosystems or biomes; and finally,
- *The Journal of Terramechanics* – which is primarily devoted to scientific articles concerned with research, design, and equipment utilization in the field of terramechanics. This final journal is also intended to provide a forum for persons involved in research, development, design, innovation, testing, application and utilization of off-road vehicles and soil working machinery.

It is important to note that submission of manuscripts that are outside the scope of STILL is not a unique problem. According to Elsevier staff, *Agriculture Ecosystems and the Environment*, *Geoderma*, and *Catena*, which also have a very wide scope, also receive several manuscripts that are still considered "out of scope" for those journals. Often, this occurs because the studies are simply too local to be of interest to an international readership. Recognizing that problem, Elsevier has recently launched a new journal entitled "*Geoderma Regional*" to which manuscripts of regional importance in soil science can be transferred or directly submitted. The Editor-in-Chief for this new journal (Dr. Alfred Hartemink, University of Wisconsin – Madison, USA) anticipates that this journal can fill a crucial gap in today's and tomorrow's soil research. In the introduction to this journal, he states that "the world is facing many global issues and the soil is a critical component in their understanding and management. Most of the global issues require research that leads to solutions at national and regional levels." This journal is intended to provide a platform for such information. Persons interested in submitting manuscripts to this new journal can do so through: http://www.journals.elsevier.com/geoderma-regional/. As Secretary-General for ISTRO and a reviewer of many manuscripts, I fully support and encourage authors to seriously consider this option.

The issue of scope for STILL does provide some very important questions for Elsevier and the ISTRO Board to discuss. These include: (1) given the number of changes that have occurred in international publishing since STILL was initiated, is the target audience still appropriate, and (2) am I correct in assuming that the acceptable topics list is sufficiently focused for ISTRO members to provide a pool of competent reviewers? If the answer to both of these questions is yes, my original statement in the "Letter to the Editor" outlining the obligation of ISTRO members to provide the 800–1500 high-quality reviews is appropriate. However, even if the Board decides to narrow the aims and scope for STILL, it will undoubtedly take some time before authors notice the shift and submit fewer manuscripts that are outside the intended scope.

So what does this mean for ISTRO members? Currently, the organization has an active membership of approximately 385 scientists and engineers. Therefore, every active ISTRO member should be willing to provide between two and four high-quality peer reviews per year. This is only one review every three to six months, and is certainly not a burden for anyone actively working