SCIENTIFIC WRITING: MEETING THE READER'S NEEDS. Kent Harrison, Professor, Department of Horticulture & Crop Science, Ohio State University, Columbus, OH 43210.

Scientific writing is an expectation and responsibility of any professional weed scientist. It is a painstaking task for which most scientists are poorly trained, and their efforts often result in wordy, pretentious, or cryptic screeds that are destined for rejection or obscurity. Science is complex, but communicating it to readers effectively is always possible. However, scientific writing requires more than just a sound knowledge of grammar and composition. The writer's ability to meet the reader's needs comes from an understanding of how readers perceive and interpret scientific information and concepts during the reading process. Serious scientific readers rely wittingly or unwittingly on their knowledge of the scientific method to interpret and assimilate new information, so they expect to see the method's logic, organization, and clarity reflected in the stuff they read. The critical reader's mind poses the following questions in chronological order: What is the problem being addressed? Why is it important? What have others done to address the problem? What have the authors done to address the problem and how is their approach different from previous work? What are their findings and how do they interpret the results? Where do we go from here? Once the writer formulates appropriate responses to these questions, the interaction of substance and structure can be fine-tuned to make the responses as comprehensible as possible. Simple guidelines are available for optimizing sentence and paragraph structure in scientific writing, so that in the end the reader is allowed to focus on the substance of the paper rather than the structure of its content.

2007 North Central Weed Science Society Proceedings 62:211.