Guidelines for the Preparation and Presentation of Posters at Scientific Meetings

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ASHS has markedly increased emphasis on poster presentations of scientific papers at its Annual Meetings. An attempt will be made by the meeting organizers to have 50% of the contributed papers presented as posters at the 1981 Annual Meeting. Since many of our members have not previously presented papers in this form, a discussion of poster preparation and presentation techniques is appropriate.

Many of the advantages and disadvantages of posters have been discussed previously (2, 3, 4, 5, 6). Major benefits include increased time for intensive discussion of paper results, reduced schedule conflicts with concurrent sessions, time for an increasing number of presentations, and greater flexibility in organization of the Annual Meeting. With poster presentations, the results of a project are available to participants during a longer time period (at ASHS meetings, attempts will be made to have a poster on display for the full multi-day meeting period) than the usual 15 minute oral presentation. This increased exposure not only allows for greater flexibility for participants, but also aids the Program Committee with scheduling symposia, working group meetings, and other special events.

The emphasis on posters does present some potential disadvantages. Not all types of research results lend themselves to poster format. For example, results from complex multifactorial experiments are difficult to clearly present as a poster. As compared to a presentation based on slides, posters may require more time and expense to prepare and are more difficult to transport. However, the time and expense in preparation of a good quality poster may be integrated with the concurrent preparation of slides and of figures for publication. In fact, slides of parts of posters have been used very effectively in subsequent oral presentations, since the information tends to be well-organized and simplified.

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This article will first discuss some basic design guidelines for poster presentations at ASHS meetings and then 3 alternate methods of preparation of poster materials will be reviewed.

GUIDELINES FOR POSTER PREPARATION

ASHS provides a display area of 1.2 by 2.4 m (1,4). This display backing may (in some cases) be formed from 2 boards joined at the center; thus (in this case), the display area actually consists of 2 sections of 1.2 by 1.2 m. Since these 2 sections are usually joined at an angle, no rigid materials should be planned to cross this juncture. The backing may not be particularly esthetic, so a covering supplied by the poster presenter may be appropriate. Poster materials can be secured to the backing by heavy tacks or tape.

The organization of the information on the poster is up to the individual. Generally, the poster is organized along the lines of a formal paper and includes title, objectives, methods, results, discussion and conclusions. However, a poster should be considered an illustrated abstract of a publication. Thus, methods are usually deemphasized unless important in the interpretation of the results. Conclusions are very important, as the viewer will want to see how you interpret your results. The best posters usually make 1 to 3 main points — these are the themes you want an observer to depart with after viewing your poster. Simplicity and clarity are paramount; detail can be provided in handouts, related reprints, or oral discussion. The person presenting the poster can have a notebook with additional figures, data, and methods to aid in addressing detailed questions.

Posters usually consist of 3 components: lettering, figures and tables, and accessory materials.

Lettering

Title. The title should be the same as that appearing in the abstract published in HortScience. Letters for the title should be a minimum of 2.5 cm high and in bold, dark contrast to the background. The title should include the author(s), affiliations, and abstract number.

Script. Table and figure headings and text should be in bold-face lettering of 0.6 to 1 cm high (or larger) so that they can be read at a distance of 1 to 2 m. Paragraphs and complex sentences should be kept to an absolute minimum. Outlines consisting of short, easily read statements are generally preferable. Detail can be presented in handouts.

Figures and tables

Numerals and letters included in figures and tables have the same size requirements as in script. The number of illustrations should be kept to a minimum,
usually not more than 8 per poster. Final figure and table size will depend on the complexity of the information, but 20 x 25 cm is usually minimum. Properly prepared figures can be photographed and used in slides and subsequent publications, thus serving multiple purposes.

Accessory materials

A 10 x 15 cm picture (or larger) of the person presenting the poster is useful in identifying to whom additional questions should be addressed.

A packet attached to the poster and containing related reprints and handouts is useful in providing further detail.

A packet attached to the poster for requests for additional information is useful. Index cards can be provided for addresses and comments. Often, business cards with notes on the back are left in such packets.

Additional display items, such as potted plants, preserved specimens, cultures, etc. can be attached to the poster by the use of Velcro strips. One square centimeter of Velcro will hold about 350 g. Maintaining the viability of live specimens in transport may be difficult.

PREPARATION TECHNIQUES

Methods for preparing poster materials can be grouped into 3 categories. Often, a combination of preparation techniques is used, depending on the information presented and the availability of services.

Hand-drafted lettering/figures

Leroy lettering, press tapes and hand lettering can all produce clear, readable posters. If the researcher does not wish to personally prepare the poster, expertise is usually available within the department, university, or from private establishments (photoart stores, sign makers, artists). The costs of such preparation methods will be directly related to the amount of labor that must be hired and the complexity of the material, but, in most cases, this is the most expensive of the methods of preparing posters. Preparation of large color prints from 35 mm slides (the usual method of photographically recording observations) is prohibitive. However, a recent development in Xerox technology allows an 20 x 25 cm color reproduction of a 35 mm slide for less than $1.00 each. Script using an IBM Executive typewriter can be read easily if all upper-case letters are used. Many journalism facilities will have a headline setter which can produce large type on 35 mm film appropriate for titling.

Photomechanical transfer process (PMT)

Almost any organization that has an information/editorial office will have access to, or equipment for, PMT reproduction. This process takes a prepared copy and photographically enlarges it up to 300%. Final page copy up to 35 x 42 cm and on photographic quality paper can be produced from typed copy or most any figure. White letters and figures on black background can be produced. Color can be added by hand after the black and white copy is made. Text script for posters can be readily prepared by PMT using typed copy such as with a silk ribbon and an IBM letter Gothic (pica). The clearest type will be on white clay-coated paper usually available in art supply centers. Title script is best prepared using bolder copy (press tapes, etc.). The advantage of PMT is rapid production of materials and low cost (a 22 x 35 cm sheet usually costs about 2 dollars). If figures, text, etc. can be grouped and enlarged on a single sheet to be separated later for the poster, costs for a whole poster can be under 10 dollars.

Computer output

Computers can be used to prepare copy of text, tables and figures. Access to a plotter is essential and such availability will be at small plotters associated with desk and laboratory calculators or at large graphics centers associated with system computers. The latter offer the greatest flexibility as to size of type (almost unlimited), options for figure preparation (multicolor, ink drawings) and paper size (to 1 m wide). However, use of large graphics systems require considerable familiarization with system software routines and an active financial account. Almost any printer/plotter will be able to work with both numerals and letters and be able to readily produce XY graphics and bar graphs. Input information can be typed directly at a console, but, unless the amount of data is small, punch cards, tapes, and cassette tapes or the use of a data file in computer memory is advisable. Generally, 3 to 5 trials will be needed before an output is obtained that is suitable. Unless the computer system is used more than once or twice a year, working with a technician is both time saving and cheaper. Advances in computer technology are rapid and their use for the production of visual displays will increase rapidly. For example, multicolor slides can now be prepared directly by computers simultaneously with printed paper output. Costs vary widely, but a line graph drawn in ink on 1 m wide paper and of publication quality will cost about 2 to 3 dollars.

Once one becomes familiar with such devices as PMT and computer graphics, the production of visual displays becomes so easy that the tendency is to include too much information on a poster. Again, simplicity and clarity are essential. In addition, a poster composed entirely by computer can be very drab and rather oppressive.

Color can be used effectively to both lead the viewer's eye through the organization of your poster and to add interest. Color can be added in the backing (colored construction paper), in colored pictures, or as multi-colored graphs and charts. Red/green and blue/green combinations should be avoided since a viewer may be color-blind.

Almost any organization has expertise that is available to help with the preparation of posters. Most administrations become more than supportive when they realize that the poster will be representing the organization at a national meeting. In many cases, the entire poster can be prepared by competent experts much faster and at a more reasonable cost than if done by researchers unfamiliar with graphic arts. However, with the myriad of poster preparation techniques available, the expense of posters need not be cause for anxiety for researchers. When properly prepared, the poster will be utilized many times in future presentations and discussions and will become a valuable asset to the research program.

Literature Cited