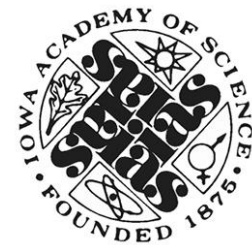


# Tips for Writing an Abstract



## About Abstracts

An abstract is a summary of the research placed at the beginning of a poster, journal article or research report. IJAS members participating in the Annual Meeting Competition will write an abstract for their posters. You may also need to write an abstract for other competitions or if your research is published. Use these tips to improve the quality of your abstract.

A well written abstract is very important. At a poster session many of the participants will only read the title and abstract before moving on to the next poster. So it is critical that your abstract clearly communicate the problem investigated, the methods used and the implications of the research. Each reader will decide if the rest of your poster is worth reading based on the abstract. Do not be offended if you witness someone reading your abstract and then moves on to the next poster without reading more. There is almost never enough time for every person in the session to read every poster and that's ok. Some readers will only read the rest of your poster if they discover a connection between your research and their own. Others will read more of the poster if the abstract is interesting to them in any way. By having a good abstract you are doing your best to insure that the people who most need to read your poster do!

## Aspects of a Good Abstract

Good Abstracts are:

### Concise

A well-written abstract clearly states the problem investigated, the methods used, major results and sometimes provides an overview of the conclusions. Every sentence in the abstract should be necessary and direct. Use digits for all numbers and abbreviate whenever possible (2 instead of two, 65% instead of 65 percent, 34g instead of 34 grams). For IJAS events, do not cite references in the abstract (cite them in the paper/poster/presentation). Other events/publications may have other standards regarding citation.

### Accurate

The abstract should not overstate (or understate) the value, results or conclusion of the research. It should be specific. Identify species, chemicals, and procedures in scientific terms rather than by common names. Replace general wording with specific wording whenever possible. For example:

Good: Relative humidity was measured using a Sling Psychrometer and a Digital Hygrometer.

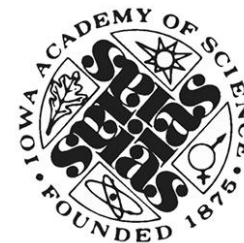
Not as Good: Relative humidity was measured by two methods.

## **Non-evaluative**

An abstract is not a review of the research or the results. It should be informative rather than judgmental.

Good: Treated seed germination is significantly higher ( $p=0.047$ ) than non-treated seed germination.

Not as Good: Treated seeds grow better than non-treated seeds.



## **Grammatically Correct**

Check grammar and spelling.

Use 'I' and 'we' sparingly. Use 'I' only when referring to yourself and do not refer to yourself as 'the researcher'. Use 'we' only when the research was conducted by a team and you are referring to the team. We should not be used to identify a group larger than your research team.

## **Proper Length**

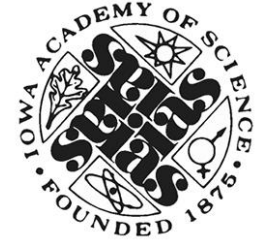
An abstract should never be longer than one page. The longer the research paper, the longer the abstract will be. The most common mistake in writing an abstract is to make it too long or too short. An abstract that is too long bogs the reader down with details that are only important when reading the full text of the research. An abstract that is too short will leave out material that is necessary in determining if the entire poster/report should be read. The key to a well-written abstract is balance. For IJAS events we recommend an abstract of 100-250 words.

## **General Abstract Outline**

1. Paper/Poster/Research Title
2. Author Name(s)
3. Rationale (So what? Why is the research important?)
4. Problem Statement
5. Methods (briefly -- what data did you collect, how did you collect it and how did you analyze it)
6. Results (very briefly describe the data)
7. Implications or Conclusions (conclusion, possible applications/implications and/or future research)

*None of these sections should be more than 1-3 sentences.*

## Sample Abstracts



### Sample One

Does mowing reduce sod density and promote forb recruitment in a mature prairie reconstruction? Amy L. Carolan and Laura L. Jackson

Many mature prairie reconstructions lack diversity but are too competitive for new seedlings to establish themselves. It is possible to reduce competition and sod density for recruitment by defoliating (mowing) adult plants. Our objective in this experiment was to promote forb recruitment through the use of different mowing regimes. To test the effects of mowing frequency, 18, 15m x 20m plots were assigned to one of three mowing regimes, and were broadcast seeded with 10 species of native forbs. To measure above and below ground effects, crowns of mixed warm season grasses and two native forb species were extracted, dried and weighed. Seedlings were counted by species using 12, 0.25m<sup>2</sup> quadrats in each plot. The results showed that typically mowing did reduce crown size, however it did not have a positive or negative affect on initial seedling establishment. While mowing does appear to reduce sod density it does not affect seedling germination, however it is too soon to tell if mowing affects seedling survival.

### Breakdown of Sample One

Rationale – Many mature prairie reconstructions lack diversity but are too competitive for new seedlings to establish themselves. It is possible to reduce competition and sod density for recruitment by defoliating (mowing) adult plants.

Problem Statement – Our objective in this experiment was to promote forb recruitment through the use of different mowing regimes.

Methods – To test the effects of mowing frequency, 18, 15m x 20m plots were assigned to one of three mowing regimes, and were broadcast seeded with 10 species of native forbs. To measure above and below ground effects, crowns of mixed warm season grasses and two native forb species were extracted, dried and weighed. Seedlings were counted by species using 12, 0.25m<sup>2</sup> quadrats in each plot.

Results – The results showed that typically mowing did reduce crown size, however it did not have a positive or negative affect on initial seedling establishment.

Conclusions – While mowing does appear to reduce sod density it does not affect seedling germination, however it is too soon to tell if mowing affects seedling survival.

### Sample Two

Nostrils are independent with respect to asymptomatic carriage of *Staphylococcus aureus* Beau J. Kildow, Colin P. O'Sullivan, Caleb J. Gradoville, Colby B. Rohde and Rachel L. Robson, Morningside College

Asymptomatic carriage of *Staphylococcus aureus*, and especially methicillin-resistant *S. aureus* (MRSA), in the human nostrils is an increasing clinical concern. Yet, there is no universal protocol for testing for *S. aureus* or MRSA carriage. Previous studies of asymptomatic *S. aureus* assume that, within a single individual, carriage is the same in both nostrils. This study tested the hypothesis that *S. aureus* and MRSA carriage in each nostril is independent of the other. The right and left nares of healthy adult volunteers were individually swabbed and tested for the presence of *S. aureus* and, if positive, for MRSA. *S. aureus* isolates were defined as mannitol-fermenting, DNase-positive, catalase-positive, coagulase-positive, gram-positive Staphylococci. Methicillin resistance was defined as having a zone of inhibition of less than or equal to 10 mm around an oxacillin disk using the Kirby-Bauer technique. Of 251 volunteers tested, 37% (n = 92) tested positive for *S. aureus* carriage. However, 60% (n = 55) of *S. aureus* carriers had *S. aureus* in only one nostril. Thus, carriage of *S. aureus* is significantly more likely in one nostril than in both ( $p < 0.05$ ). As with *S. aureus* carriers overall, MRSA carriage in only one nostril was the norm, with all 10 MRSA carriers harboring the MRSA in only one nostril. These results indicate that a single individual's nares are not homogenous with respect to *S. aureus* or MRSA carriage, and that both nostrils should be swabbed separately when testing individuals for MRSA. Tests are ongoing to determine whether individuals who carry *S. aureus* in both nostrils carry genetically distinct strains in each nare.



### **Breakdown of Sample Two**

**Rationale** - Asymptomatic carriage of *Staphylococcus aureus*, and especially methicillin-resistant *S. aureus* (MRSA), in the human nostrils is an increasing clinical concern. Yet, there is no universal protocol for testing for *S. aureus* or MRSA carriage.

**Problem Statement** - Previous studies of asymptomatic *S. aureus* assume that, within a single individual, carriage is the same in both nostrils. This study tested the hypothesis that *S. aureus* and MRSA carriage in each nostril is independent of the other.

**Methods** - The right and left nares of healthy adult volunteers were individually swabbed and tested for the presence of *S. aureus* and, if positive, for MRSA. *S. aureus* isolates were defined as mannitol-fermenting, DNase-positive, catalase-positive, coagulase-positive, gram-positive Staphylococci. Methicillin resistance was defined as having a zone of inhibition of less than or equal to 10 mm around an oxacillin disk using the Kirby-Bauer technique.

**Results** - Of 251 volunteers tested, 37% (n = 92) tested positive for *S. aureus* carriage. However, 60% (n = 55) of *S. aureus* carriers had *S. aureus* in only one nostril. Thus, carriage of *S. aureus* is significantly more likely in one nostril than in both ( $p < 0.05$ ). As with *S. aureus* carriers overall, MRSA carriage in only one nostril was the norm, with all 10 MRSA carriers harboring the MRSA in only one nostril.

**Conclusion/Implications** - These results indicate that a single individual's nares are not homogenous with respect to *S. aureus* or MRSA carriage, and that both nostrils should be swabbed separately when testing individuals for MRSA. Tests are ongoing to determine whether individuals who carry *S. aureus* in both nostrils carry genetically distinct strains in each nare.