Title and Executive Summary

A. S. M. A. Haseeb Research Clusters, IPPP and Dept. of Mechanical Engineering University of Malaya

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Workshop on Research Grant Proposal Writing: Attaining Essential Quality for Success, Research Clusters, IPPP, University of Malaya, 06 Nov 2019

References

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The Title

- Extremely important and needs great care → will be read first
- Captures nature of work → must relate to specific research question being studied
- Should relate to grant funder's application call
- "Good title" → fewest possible words that adequately describe contents of proposal
- Accuracy of title → Very important
- Concise, specific and informative
- Usually emerges when proposal has been completed

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The Title...

How to Prepare the Title

- List → most important keywords
- · Think of a title that contains these words
- NEVER contains → abbreviations, chemical formulas, proprietary names or jargon
- · Think, rethink of title before submitting
- Be very careful of grammatical errors
- Waste words should not be used \rightarrow eg, 'studies on', 'investigations on', 'a', 'an', 'the' etc.
- · Avoid the use of the word "using"



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	Title
Original Revised	Remarks
Preliminary Effect of Zn on observations on the effect of Zn element on anticorrosion of zinc plating layer	Long title distracts readers. Remove all redundancies such as "studies on", "the nature of", etc.
Action of antibiotics Inhibition of growth on bacteria of mycobacterium tuberculosis by streptomycin	Titles should be specific. Think about "how will I search for this piece of information" when you design the title.
Fabrication of carbon/CdS coaxial nanofibers displaying optical and electrical properties via electrospinning carbon Electrospinning of carbon/CdS coaxial nanofibers with optical and electrical properties properties	"English needs help. The title is nonsense. All materials have properties of all varieties. You could examine my hair for its electrical and optical properties! You MUST be specific. I haven't read the paper but I suspect there is something special about these properties, otherwise why would you be reporting them?" – the Editor-in -chief

Title formation

Organic matter for sustainable agriculture in the tropics

Residual accumulation of herbicide residue threatens the sustainability of rice-wheat rotation systems in northern Bangladesh. The incorporation of green manure into the soil may stimulate the co-mineralization of pesticides and their metabolites. A two year field experiment was conducted on the experimental station of the Bangladesh Rice Research Institute to evaluate the effects of the application of *Azolla pinata* and *Azolla carolingiana* as green manure on the mineralization and co-metabolization of the herbicides propanil and buthachlor in a flooded rice soil.....



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Title formation

Organic matter for sustainable agriculture in the tropics

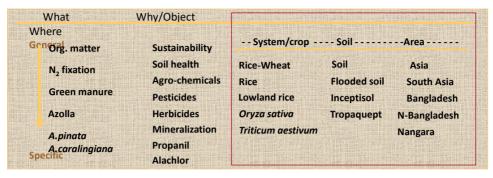
Studies on the effects of *Azolla pinata* and *Azolla carolingiana* green manure on the mineralization and co-metabolization of Propanil and Alachlor in a flooded Tropaquept under *Oryza sativa* L. - *Triticum aestivum* L. rotation in Nangara village of Northern Bangladesh

Residual accumulation of herbicide residue threatens the sustainability of rice-wheat rotation systems in northern Bangladesh. The incorporation of green manure into the soil may stimulate the co-mineralization of pesticides and their metabolites. A two year field experiment was conducted on the experimental station of the Bangladesh Rice Research Institute to evaluate the effects of the application of *Azolla pinata* and *Azolla carolingiana* as green manure on the mineralization and co-metabolization of the herbicides propanil and buthachlor in a flooded rice soil.....

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Title formation

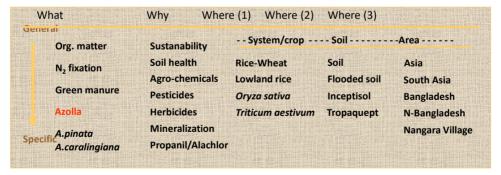


Residual accumulation of herbicide residue threatens the sustainability of rice-wheat rotation systems in northern Bangladesh. The incorporation of green manure into the soil may stimulate the co-mineralization of pesticides and their metabolites. A two year field experiment was conducted on the experimental station of the Bangladesh Rice Research Institute to evaluate the effects of the application of *Azolla pinata* and *Azolla carolingiana* as green manure on the mineralization and co-metabolization of the herbicides propanil and buthachlor in a flooded rice soil.....



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Title formation



Select main words for title

- → As general as permissible
- → As specific as required



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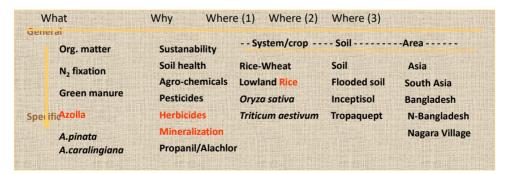
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Title formation



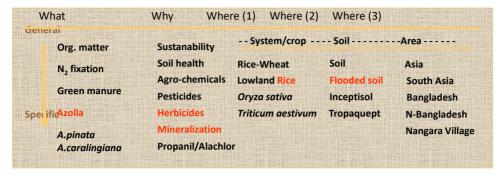
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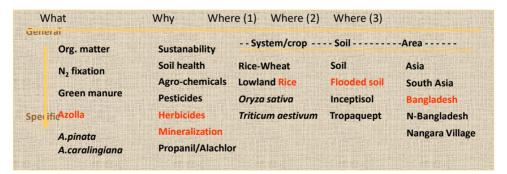
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Title formation

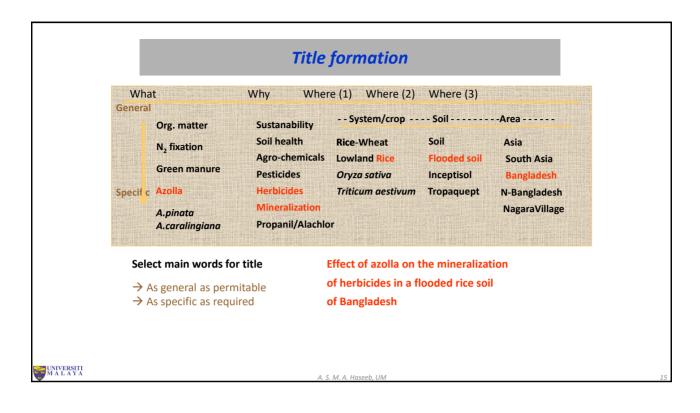


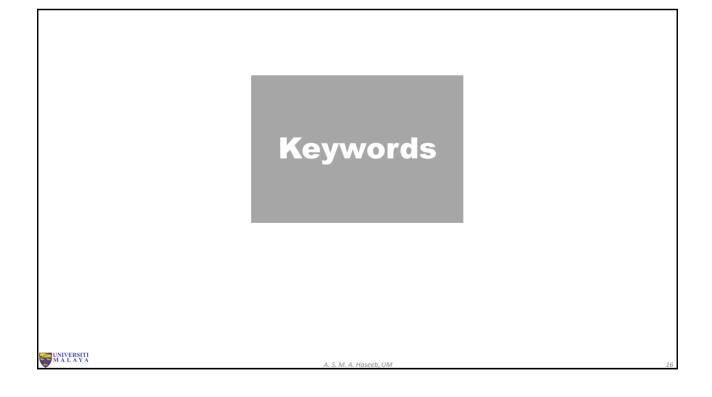
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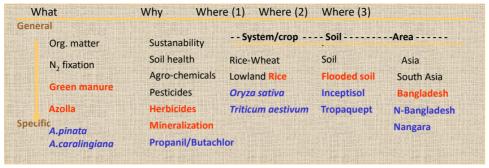




Keywords → for electronic searches and indexing
 Use keywords that are specific
 Should reflect what is essential about the proposal

Wey Words Use relevant words of lower hirarchy for key word list → different from title words → 5 key words A.S.M.A. Hoseeb, UM





Effect of azolla on the mineralizaion of herbicides in a flooded rice soil of Bangladesh

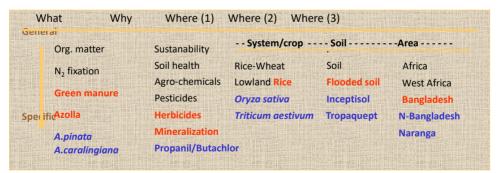
Use relevant key words of lower hirarchy for key word list

- → different from title words
- → 5 key words

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Key Words



Effect of azolla on the mineralizaion of herbicides in a flooded rice soil of Bangladesh

Use relevant key words of lower hirarchy for key word list

- → different from title words
- → 5 key words

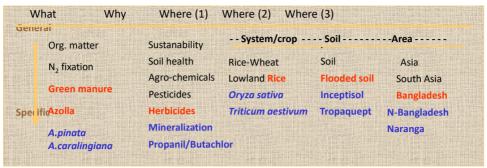
5-6 Key words:

A. pinnata, A. Carolongiana, Propanil, Oryza sativa, Inceptisol

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Effect of azolla on the mineralizaion of herbicides in a flooded rice soil of Bangladesh

Use relevant key words of lower hirarchy for key word list

- → different from title words
- → 5 key words

Key words ... in alphabetical order!

A. pinnata, A. carolongiana, Inceptisol, Oryza sativa, Propanil

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Introduction

What eneral	Why Where	e (1) Where (2)	Where (3)	
Org. matter	Sustanability	System/crop	Soil	Area
N ₂ fixation	Soil health	Rice-Wheat	Soil	Asia
	Agro-chemicals	Lowland Rice	Flooded soil	South Asia
Green manure	Pesticides	Oryza sativa	Inceptisol	Bangladesh
per ificAzolla	Herbicides	Triticum aestivum	Tropaquept	N-Bangladesh
A.pinata	Mineralization			Nangara
A.caralingiana	Propanil/Butach	lor		

Effect of azolla on the mineralizaion of herbicides in a flooded rice soil of Bangladesh

Use relevant key words of higher hierarchic order in the Introduction

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Executive Summary / Abstract

Extremely important part of proposal – reviewers will very much be influenced by this

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- May be used to decide whether proposal should receive further serious consideration
- · Must provide most important message you want to convey
- Must entice reviewer to read more about proposal
- · Accurate description of proposed work
- · Highlights importance and relevance of research
- Informative to people working in same or related fields
- · Guide to proposal



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- Condensed version of your proposal → self-contained description of problem statement, objectives, methodology, expected output, significance
- May follow \rightarrow "Problem- Purpose -Method- Application" structure
- Balanced: all major areas are covered
- Clear and easy to understand → not verbose
- · Focused: no superfluous information is covered
- Able to stand on its own
- Succinct and concise



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Executive Summary/Abstract Provides Answers to These Questions: **Background** What do you intend to do? **Problem** Why is the work important? **Objectives** If any What has already been Prelim. Results done? Strategy How are you going to do the work? **Significance** Methodology Executive Summary/ abstract is not an introduction \rightarrow summary of whole grant application

Signals of the Structure

Problem

... has not been determined

... is unclear

X is limited by ...

The questions remains if...

Objectives

Our objective is ...

We propose to ...

We will examine the hypothesis that ...

Strategy

We will achieve this goal by ... Specifically, we will ... by ... Our general strategy is to ...

Significance

... is important for ...

These results may play a role in ... Y can be used to ...

... will provide insights into...

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Example 1

Global warming is arguably one of the most pressing concerns of our time. However, we lack an effective model to predict precisely by how much the temperature will rise as a consequence of the increased levels of CO₂ and other factors. The width of this range is due to several uncertainties in different elements of the climate models, including the variability in the Sun's rate of energy output. To gain greater insight into the relationship between solar energy output and global temperature, we propose to launch the internationally led ABC satellite in April 2018. Our aim is to collect for 2 years data on the solar diameter and shape, oscillations, and photospheric temperature variation. We will assess these data to model solar variability. Our findings will dramatically advance our understanding Significance of solar activity and its climate effects.

Background

Problem

Objectives

Strategy

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Example 2

X is a major human pathogen, which infects over 100 million people per year, leading to high morbidity and mortality. Current therapies for X are expensive, poorly tolerated, and only partially effective in controlling the pathogens and in limiting disease. Recently, we and other succeeded in establishing a system to grow X in cell culture. These systems will allow us to completely dissect the life cycle of X. Our initial characterization of cell culture-produced X indicates unusual physical properties. Understanding of X's life cycle will aid in the development of improved pharmaceuticals.



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Avoid in executive Summary/ Abstracts

- · Descriptions of past accomplishments
- · Any information not covered in your proposal
- · Any confidential information
- · Graphs or images
- Citations



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	Summary	
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