Certainly, the hardest part is picking a project title. Ideally, your team would choose something exciting to you and your team, possibly related to the problems you already know or interest in. Typical projects fall into several categories: application of the technology/tool (do a review, pro and cons), analysis of the technology of mechanization, and data collection or survey. Please arrange a discussion session with your team members and your class instructor before submitting a proposal. Prepare 1 page brief proposal for your mini class project related to the Agricultural Mechanization and Irrigation topic as suggested below.

Submit your proposal via PUTRABLAST or email to me at asuhaizi@upm.edu.my.

Due date is by ________________

Your proposal must include:

- Title/Topics:
- Objective(s):
- Background:
- Problem Statement:
- Material and Methods:
- Expected Outcomes:
  - Milestone:
- References:
Example of Proposal

Group 1

Title of Project Proposal:
The best mechanism and machinery for the high output mushroom production at Unit Cendawan, Taman Pertanian Universiti (TPU), Universiti Putra Malaysia.

LECTURER: DR. AHMAD SUHAIZI BIN MAT SU

<table>
<thead>
<tr>
<th>Group Members</th>
<th>Matric ID</th>
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<tbody>
<tr>
<td>RAZANATUL HUSNA BINTI YUSOF</td>
<td>189597</td>
</tr>
<tr>
<td>MUHAMMAD ARSYAD BIN AZAHAR</td>
<td>181791</td>
</tr>
<tr>
<td>MUHAMMAD AZRUL BIN AZMAN</td>
<td>181843</td>
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<tr>
<td>GARY HERMAN</td>
<td>187341</td>
</tr>
<tr>
<td>NUR SHAZANA BINTI SOBRI</td>
<td>189801</td>
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Objectives:

a. To learn the process of mushroom production
b. Analysis the mechanism and machine involve in the production
c. Discuss the cost efficiency on mushroom production based on process involve.

Background:

Mushrooms have been identified as one the high-value commodities under Malaysia' National Agro-Food Policy (2011-2020) increase in demand. The development of the mushroom industry has been intensified which focuses on further development through area expansion, increased productivity and supported by R & D. The climatic condition suitable of mushrooms throughout the year. Thus, Malaysia has the potential to be large mushroom which can compete in the world market, there are many issues and challenges faced by this industry.

Problem statements: Is the process involved in mushroom production really efficient in term of cost and its productivity?

Material and method:

1. Material: spawn (spore), substrate, plastic bag, store room and water.
2. Process: get spawn and substrate -> prepare the substrate -> pack the plastic bag -> incubation -> fruiting -> harvest

Expected outcome:

1. Improve the production system
   a. Currently, farmers use sawdust from rubber wood, rice bran and lime as the substrate. Thus require assessment of other substrates
2. Establishment of mushroom bag centre
   a. The production of mushrooms bag will be carried out by the Department of Agriculture in Malaysia to ensure that mushrooms are produced in protected environment and are cost effective.
3. Expansion of land area and increase productivity
   a. Currently production are by small-holding farmers. Thus more land will be opened especially on idle land or integrated cultivation with other crops.
4. Development of technology to increase the productivity
a. For develop methods for producing mushrooms on a non-composted substrate and new technique for sterilization by computerized environmental control system.

**Milestone:**

<table>
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<tr>
<th>No.</th>
<th>Activity</th>
<th>Date</th>
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<tbody>
<tr>
<td>1.</td>
<td>Make a visit to Unit Cendawan, Taman Pertanian Universiti (TPU), Universiti Putra Malaysia</td>
<td>By March 2019</td>
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<tr>
<td>2.</td>
<td>Complete the survey and data collection</td>
<td>By April 2019</td>
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<td>3.</td>
<td>Complete the written report (Soft-copy form)</td>
<td>By April 2019</td>
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<tr>
<td>4.</td>
<td>Complete the final draft for video</td>
<td>By May 2019</td>
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<td>5.</td>
<td>Final project presentation</td>
<td>20 May 2019</td>
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**References:**


Evaluation Form

Class Project of TKP3501: Agricultural Mechanization

Presentation for: Proposal / Final

Evaluator: ………………………

Class group: 12    3

Lab group:
1  2  3  4  5  6  7  8  9

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<thead>
<tr>
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<tr>
<td>Introduction          (States relevant issue, objective, problem statement – 20%)</td>
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<tr>
<td>Methodology           (States relevant method – 20%)</td>
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<tr>
<td>Result and Conclusion (States relevant expectation of the finding, suitable machineries, cost and analysis – 20%)</td>
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<tr>
<td>General Content       (Relevant information to the problem statement - 10%)</td>
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<tr>
<td>Elaboration and thought (Factual information, though fully or inadequate-20%)</td>
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<td>Ability to answer questions (10%)</td>
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<td><strong>TOTAL</strong></td>
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Overall

________ ⊗ 1-4  _______ ⊗ 5-7  _______ ⊗ 8-10

Your comment/suggestion:

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