AGRICULTURE BUSINESS PLANNING

Chapter 1

Problem Identification at Agriculture Field

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Lecture Overview

- How to identify the problem at Agriculture Field
  - Discover the problem
  - Analysing the problem

Introduction to this chapter: Every successful business must begin with the identification of the right problems. The ability to identify problems in agriculture will create correct solutions that can generate profits. Problems in agriculture are very complex. Starting from upstream to downstream, everything is related to environmental, economic and social issues. Thus, if the identification of the problem is not done properly, there will be possibilities such as making a profit but damaging the environment; the environment remains sustainable but there is no increase in farmers' income and so on.

This topic gives students a solid comprehension particularly creating business in agriculture, they must first know the problems faced by the various parties involved, namely providers of production inputs, farmers, distributors, retailers, and the last is those the final consumers. With the right information about the types of problems, the business ideas are able to solve real problems. It leads to planning the program reach the right target.

Discover the Problem

Oxford Languages Dictionary defines Problem as a matter or situation regarded as unwelcome or harmful and needing to be dealt with and overcome

Discovering problems can be done by various ways such as:

- Observation
- Literature
- Discussion

Observation aims to explore the situation in a particular object or area. This observation activity is carried out directly by touching the object or visiting the area that you want to explore. After making observations, it is then determined what things show irregularities which are then determined to be problems.

Exercise-1: Consider a problem that you observe faced by farmers who cultivate various crops namely Food crops, Horticulture, and plantation crops.

Literature mentioned here refers to scientific literature. Currently, it is very important to always be up to date on the results of scientific findings that have been published in various journals. This leads the entrepreneurs to get the novel things addresses them to keep adjusting the products and model business to fulfil the societies needs.

Exercise-2: Find an article about agribusiness of horticulture that describes problem faced by the farmers and go through the author recommendations about to overcome the problems

Discussion is an activity that is planned to discuss a certain topic. The ideal discussion contains people who understand the discussed issue at least on a general level. The planned discussion must have a conclusion.

Exercise-3a: Plan a group consists of 5 students to discuss about the plantation crops issue in Indonesia. Make summary about the problems generated.

Further, the problems identified through the students discussion group need to be confirmed to the expert consisted of plantation owners and policy makers.

Exercise-3b: Plan a group consisted of 5 students and the experts to discuss about the plantation crops issue in Indonesia. Make summary about the problems generated.

Time limitation is important when doing group discussion. This helps group members and discussion leaders to focus on the assigned topic and obtain the valid conclusions. CRLT University of Michigan suggest some discussion guideline as follows:

- Listen respectfully, without interrupting.
- Listen actively and with an ear to understanding others' views. (Don’t just think about what you are going to say while someone else is talking.)
- Criticize ideas, not individuals.
- Commit to learning, not debating. Comment in order to share information, not to persuade.
- Avoid blame, speculation, and inflammatory language.
- Allow everyone the chance to speak.
- Avoid assumptions about any member of the class or generalizations about social groups. Do not ask individuals to speak for their (perceived) social group.

The guidelines mentioned above is accepted to any kind of discussion both scientific or non-scientific discussion.

Analysing the Problem

There are so many approaches to analyse the problem such as problem tree, fishbone analysis, force field, and SWOT (Strengths-Weakness-Opportunity-Threat) analysis). This lecture will adopt the Problem Tree approach.

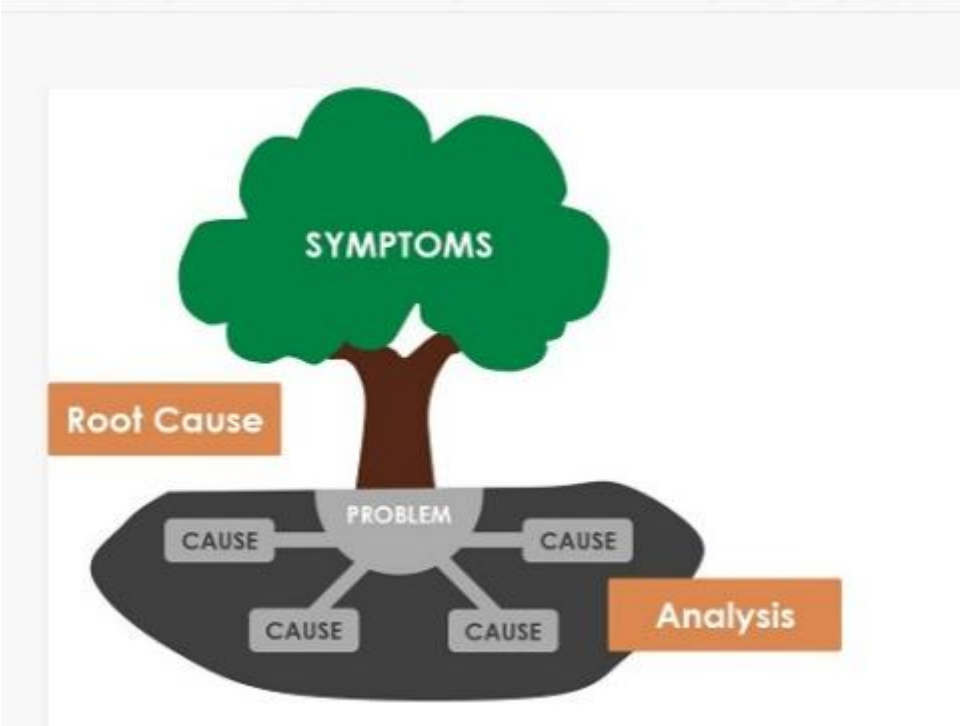
1. **What is the problem tree?**
   Problem Tree Analysis is simple yet effective tool for community groups to use to properly identify problems and determine what the most effective interventions are. This method is used by groups to determine the extent to which an organization's program activities address the root causes of the problems it seeks to alleviate and to verify that these programs can achieve the desired impact[1].
2. **Advantages of the problem trees**
   The advantages of the problem trees
   - It allows us to break down the problem, the causes and its effects, improving its analysis.
   - There is a better understanding of the problem by disaggregating it into causes and consequences.
   - It is linked to other research and analysis tools such as the Vester matrix or solution tree.
   - Facilitates the realization of other important components of a research or project in its planning stage, e.g. stakeholder analysis, risk analysis and objectives.[2]

3. **The problem tree in project planning**
   The importance of using the problem tree in conjunction with other tools, where what we seek is to:
   - Obtain significant data to describe the problem
   - Determine the causes and effects
   - Elaborate project objectives[2]
4. **Step by step to make problem tree**
   Step 1. Analyse the situation:What is happening, why is it happening and what is triggering it. Collect data that will allow you to understand the problem situation. This in itself will give you a lot of input for the next step.
   Step 2. Identify the main problems of the situation you have analysed: Any technique to generate ideas will be useful. A team brainstorming, defining by consensus what the main problem is, is usually a good alternative. However, if the problem is much more technical and requires many experts and discussions, since it is complex to differentiate causes from effects, try the Vester matrix. This alone will allow you to prioritize the main problem, and will get you a few steps ahead by giving you causes and effects of the main problem.
   Step 3. Determine the effects and causes of the main problem: You already have the trunk of the tree, now identify the causes (roots) and the effects or consequences (leaves or branches). Again, it is better if this is done as a team, seeking to reach a consensus.

Step 4. Draw the tree: Simple.

Step 5. Go deeper into causes and effects: Solving the core problem will be much easier as you determine the root causes and effects. That is, if you have already determined a cause, is it possible that this cause is brought about by something else in turn? Draw a line and go as deep as possible.[2]

Problem Tree Illustration



Source[3] : **https://images.app.goo.gl/pgNywioXMzJHrXDH9**

Analysing Problem at Agriculture Field Applying Problem Tree Approach

Step 1 : White jasmine flower (*Jasminum sambac)* is a well known flower in Indonesia. It has various purposes and special meaning to celebrate many events for many tribes and religions. Central Java Province is the production centre of this crops, particularly in Depok Village, Kandeman City, Regency of Batang. Since the flower has many purposes, the demand of it is so high. The data shows that the Indonesian white jasmine flower only fulfil 20% of domestic demands.

Step 2: According to the farmers in the region, the production decreasing is occurred by the reducing of white jasmine plantation. It is driven by the price fluctuation, the salt content in the soil is increasing, and the interest of the younger generation for jasmine cultivation has decreased dramatically

Step 3 : Occurred by the problem revealed in step 2 drives the farmers to transform their daily job from farmers to fishermans; some of them sell their land; another ones converting the white jasmine plantation with other rops such as mango and another kinds of fruits.

Step 4:

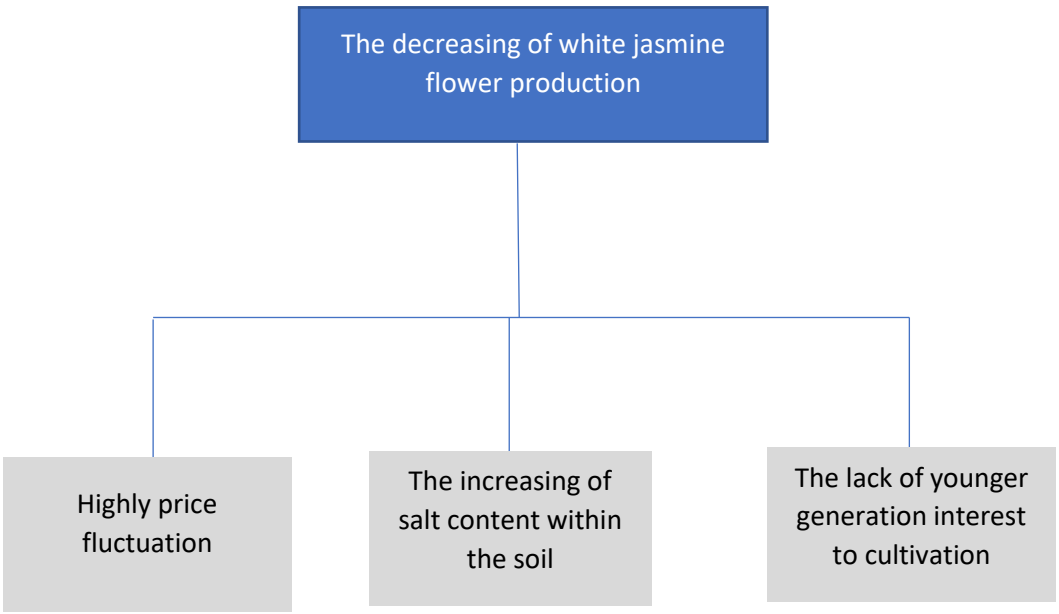


Fig 1. Step 1 + Step 2

So far, we have known the main problem in the area and the triggers of it. Further, we dig deeper to the effect of the triggers.

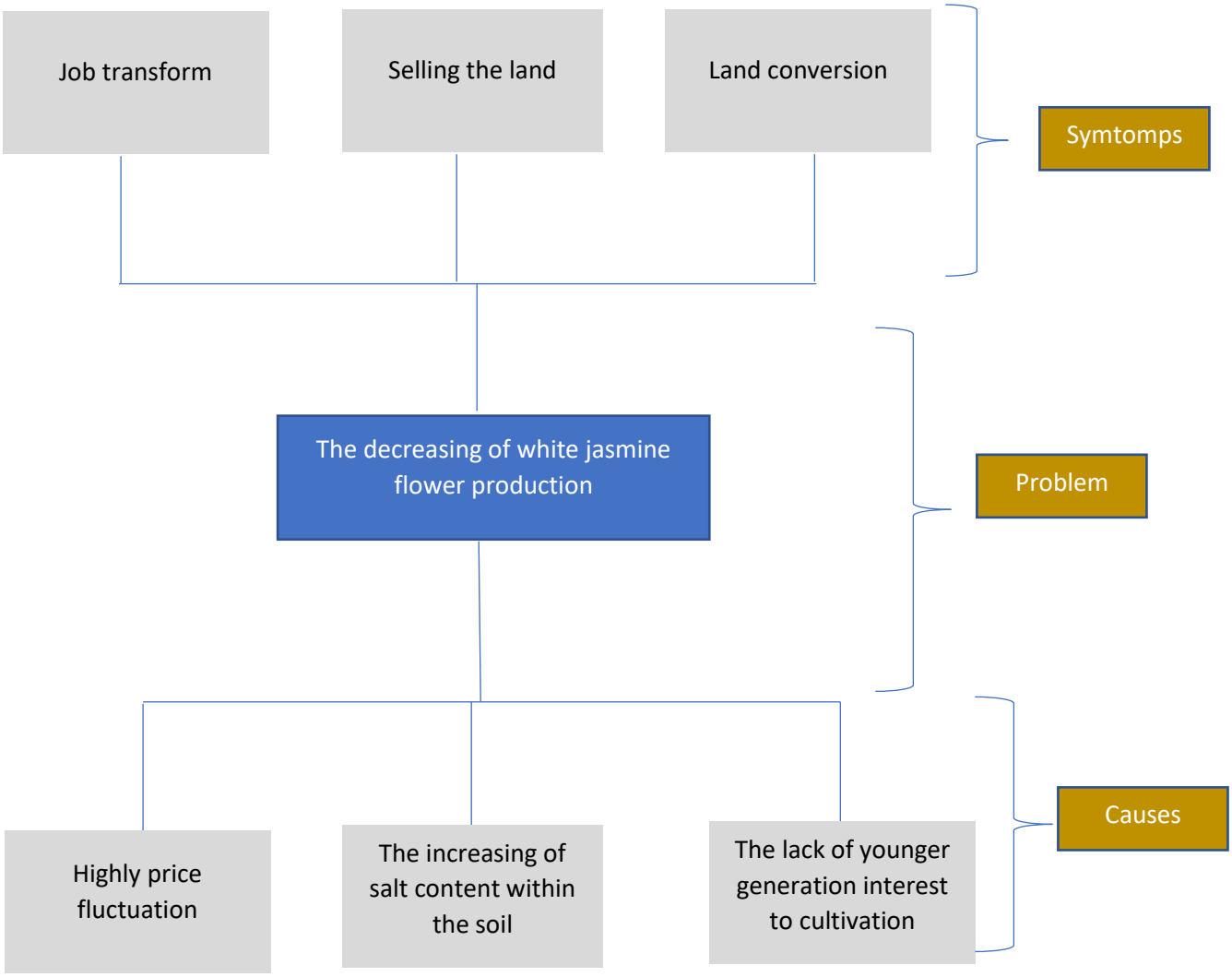


Fig 2. Problem Tree Analysis of the White Jasmine Flower Production

Exercise-4: Make the problem tree to display the problems generated through exercise 1,2,3.

EXERCISE GUIDELINE

Exercise 1 :

A. Fill the column below to answer the question at box of Exercise 1

Question	**Explain with at least 1 paragraph**
What	
Why	
When	
Who	
Where	
How	

There are 3 kind of crops namely food crops, horticulture crops, and plantation crops. Each type of crops has its own column.

Submit the work to Flearn.

Exercise 2 : (individual task)

A. Write down the summary of the article
B. Make on the list the problems you observe
C. Make the list of author recommendations

Note : The number of the words is minimum 300 and maximum 500.

Submit to Flearn

Exercise 3a and 3b : (group task)

A. Make the report
B. Write down the discussion topic
C. Write down the findings
D. Write down the conclusion
E. Attach the discussion photos within the report

Submit to Flearn

Exercise 4:

A. Draw it with various app you are interested ini
B. Do it in group according to group at exercise 3
C. Elaborate the problem tree within minimum 500 words.

REFERENCES

[1] Feed the Future. The U.S. Government's Global Hunger & Food Security Initiative. 2007. Participatory Methods and Tools for Extension. Problem Tree Analysis. https://meas.illinois.edu/wp-content/uploads/2017/02/MEAS-Participatory-Methods-Tip-Sheet-Problem-Tree-Analysis.pdf

[2]Ingenio Empresa. 2022. How to Make a Problem Tree: A Practical Example. https://www.ingenioempresa.com/en/problemtree/#The_problem_tree_in_project_planning

[3]How to use 5 Whys Tree Diagram for Root Cause Analysis?. Visual paradigm online. **https://images.app.goo.gl/pgNywioXMzJHrXDH9**