Hypothesis

**Learning Intention:**

* Use observations as the basis for formulating a hypothesis
* Apply their knowledge & understanding of agricultural science to develop arguments or draw conclusions related to both familiar & unfamiliar situations
* Compile & interpret data or other information gathered from print, laboratory & electronic sources (including websites), to research a topic or solve a problem
* Make a prediction based on the hypothesis

**What is a hypothesis:**

Proposed explanation made, on the basis of limited evidence as a starting point for further investigation.

**There are 2 types of hypothesis:**

1. **Null Hypothesis** (H0) is a hypothesis which the researcher tried to disprove, reject or nullify. The ‘null’ often refers to the common view of something
2. A**lternative hypothesis** is what the researcher really thinks is the cause of a phenomenon

**Question:**

1. **State the null & alternative hypothesis for the following:**
* **A new organic fertiliser which is environmentally safe has come on the market claims to have no effect on average yield of 70 vegetables per plant**
* **Department of agriculture wants to test the claim again as they suspect that the new fertiliser has an effect on the average yield of 70 vegetables per plant**

**A hypothesis should always**:

* Be clear & easy to understand
* Explain what you think will happen
* Be testable
* Be measurable
* Contain an independent & dependent variable

(**independent variable** – variable that is being tested & **dependent variable** is what you will see as a result)

**Example of a hypothesis in agriculture:**

Read the following examples & state if you think they are good hypothesis & give a reason for your answer

1. When fertiliser is added to plants then it will make it grow
2. **If** you add the correct amount of fertiliser to a crop, based on soil test analysis **then** the crop will reach its peak yield **because** it has the correct amount of nutrients required for the plant to grow.

In the hypothesis that yout think is a good hypothesis, can you:

1. Carryout research relating to the hypothesis (research 3 relaible sources of data) & record 3 pieces of data from each source
2. Name a control that could be used in the experiment
3. What is the independent variable?
4. What is the dependent variable?
5. What do you predict will happen in this experiment?

3 reliable sources of data

Source: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Information:

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Information:

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CV

**Scientific Method**

**Dependent variable**

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**Prediction**

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**Independent variable**

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Information:

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**Control**

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