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| AGRICULTURAL SCIENCE |
| Strand 2: Sustainable Primary Production | Sub-strand 2.3: **GLOBAL ISSUES AFFECTING PRIMARY PRODUCTION** |
| LESSON ACTIVITY 6: Agricultural Issues |

The Specific Learning Outcome (SLO) targeted in this activity are provided below.

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| **SLO#** |

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| **Specific Learning Outcomes: *Students are able to***  |

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| **Skill level** |

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| **SLO code** |

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| 27 | List global agricultural issues facing local primary production | 2 | agr2.3.2.8 |
| 28 | Describe actions taken to prevent or minimise the negative influence of global agricultural issues | 2 | agr2.3.2.9 |
| 29 | Compare the strength and weakness of specific actions taken to prevent the negative influence of global agricultural issues | 3 | agr2.3.3.7 |
| 30 | Recommend with reasons your choice of action to be taken to prevent the negative influence of specific global agricultural issues | 4 | agr2.3.4.7 |

**Global issues affecting local primary production**

The global issues affecting local primary production include:

* Biodiversity and invasive species
* Genetic resource conservation
* Introduction of new species
* Genetic engineering
* Organic husbandry
* Pollution

The following issues listed above have been described above.

**Description of course of action of the global issues listed.**

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| 1. ***Biodiversity and Invasive Species***

**What to do?*****Description of course of action 1:*** Farmers have been recommended to uproot and burn these species once seen in their farm.***Strength of the course of action:*** Simple and cheap to farmers.***Weakness of the course of action:*** Farmers may not differentiate between native weeds and invasive species.***Description of course action 2:*** Government has strictly enforced the quarantine regulations on any invasive species.***Strength of the course of action:*** Definitely preventing any further invasive species entering the country.***Recommended course of action 3****:* Enforce quarantine regulation on any seen invasive species. Invasive species enters any country through the airport and/or wharf. Government, through the Ministry of Agriculture and Forestry, should be more strict and serious about enforcing these regulations at these two entry points for any invasive species. ***Recommended course of action 4:*** Using more advanced tools/equipment in examining containers from overseas, and goods, luggage etc. of travelers; and increasing of penalty for any person bringing any invasive species into the country are effective ways of enforcing these regulations. Although the uprooting and burning of invasive species is a simple and cheap method, the major problem is to prevent/stop any more/further invasive species coming into the country.***Weakness:*** Some invasive species have very small seeds and may not be identified by quarantine officers. Regulations may not be enforced by quarantine officers especially if related and/or a good friend of an accused person. Some people, when caught with invasive species are used to secretly bribing quarantine officers. |
| 1. ***Genetic Resource Conservation/Introduction of New Species***

**Or**Controlling of all sources of new planting materials for plants or new breeds of animals produced, by local expert farmers and/or researchers.**What to do?*****Description of course of action 1:***Government, through the Ministry of Agriculture and Forestry, controls all sources of new planting materials for plants or new breeds of animals produced by local expert farmers and/or researchers. **Strength:** Government is in full control of every source of new planting materials for plants or new breeds of animals produced by local expert farmers and/or researchers.**Weakness:** Expensive to train people in the area of “genetics”***Description of course of action 2:***Farmers have a public awareness program on all sources of new planting materialsfor plants or new breeds of animals produced by local expert farmers and/or researchers. **Strength:** Farmers can access media such as radio, TV, newspaper and even face-to- face with specialists from Ministry of Agriculture, Forestry and Fisheries.**Weakness:** Most local farmers are uneducated because they either completed their studies at primary or secondary school. Hence, they can be illiterate and not able to understand especially when attempting to describe/explain genetic terms. |
| 1. ***Genetic Engineering***

***Description of course of action 1:***Government through the Ministry of Agriculture and Forestry, controls all genetic modified product produced locally or imported from overseas country.***Description of course of action 2:*** Farmers have a public awareness program on negative impacts of genetically modified product in other countries.**Weakness:** Expensive to train people in the area of “genetic engineering.”***Description of course of action 2:***Farmers have a public awareness program on negative impacts of genetically modified product in other countries. |
| 1. ***Organic Husbandry***

***Description of course of action:***Farmers have a public awareness program on the importance of organic husbandry in local primary production. **Strength:** Farmers can access media such as radio, TV, newspaper and even face-to- face with specialists from Ministry of Agriculture, Forestry and Fisheries.**Weakness:** Most local farmers are uneducated to read or don’t bother to seek advice from the expert. |
| 1. ***Pollution***

**What to do?*****Description of course of action 1:*** Farmers should be advised to recycle the biodegradable waste in the farm such as compost, and plough in waste into the soil using the implement. ***Description of course of action 2:*** Non-biodegradable waste such as chemical empty plastic containers and metals be properly disposed of, such as bury them. ***Description of course of action 3:***Farmers have a public awareness program on negative impacts of pollution.**Strength:** Farmers can access media such as radio, TV, newspaper and even face-to- face with specialists from Ministry of Agriculture, Forestry and Fisheries and easy to do.**Weakness**: Most farmers don’t care to practice the course of action 1 and 2 above |

**Exercise 4**

1. List global agricultural issues facing local primary production.L2 agr2.3.2.8

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**2.** Describe actions taken to prevent or minimise the negative influence of global agricultural issues L2 agr2.3.2.9

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**3**. Compare the strength and weakness of specific actions taken to prevent the negative influence of global agricultural issues. L3 agr2.3.3.7

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**4**. Recommend with reasons your choice of action to be taken to prevent the negative influence of specific global agricultural issues. L4 agr2.3.4.7

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