**Effects of Food Production on the Environment**  Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Read the article and complete the questions that follow.*

|  |  |
| --- | --- |
| Farm | We can survive without many things but we cannot survive without food, the production of which has become a serious environmental concern. Rapidly growing world’s population requires increased food production which is of the greatest causes of environmental degradation throughout the world. Of particular concern is meat production as modern practices of animal raising directly contribute to water and air pollution and increase carbon dioxide emissions, while crop production for animal feed and the use of land for grazing threaten biodiversity and wildlife species. |

Factory farming reduced the amount of land needed for meat production, however, these farms are a serious air and water pollutant. The waste of these animals ends up in the nature and poses a constant risk of drinking water contamination and seriously affects the air quality of the nearby areas. One solution for the problem with animal waste lays in its use for production of biofuel which can then be used for production of electricity but this practice is the exception rather than the rule.

Mass meat production has also been shown to be one of the main contributors to carbon dioxide emissions which in turn are the main cause of the climate change. The meat industry is estimated to be responsible for about 9 percent of total carbon dioxide emissions which are a result of emissions of various gases from the farms as well as from the microbial activities after application of animal waste as fertilizers.

Lastly, animal husbandry poses a serious threat to the local ecosystems and biodiversity due to the use of the land for grazing and animal feed production. As much as one quarter of the Earth’s surface is used for grazing and about one third of arable land is used to produce animal feed. As a result, the wildlife species struggle with lack of habitat, while some are even threatened with extinction.

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| Wheat | Unfortunately, animal husbandry is not the only environmental problem of food production. Crop production negatively affects the environment too. It uses even more land, while the use of pesticides, artificial fertilizers and other chemicals seriously pollutes the environment and threatens wildlife species. Avoidance or reduction of meat consumption therefore does not solve the problem with the harmful effects of food production on the environment. |

The key to solution of the problem with food production and its effects on the environment also lays in choosing locally produced food as less fossil fuel is used for its transportation as well as choosing organic over non-organic food. Organic food supplements produced without the use of chemicals which means that it dramatically reduces water, soil and air pollution. Furthermore, organic food production reduces the pressure on the ecosystems by avoiding the use of the toxic agricultural chemicals as well as farming with the harmony with the nature. Rather than driving wildlife species away, organic farmers attract them to their land as they play the key role in pest prevention and management.

Landroots.org. (2012). Effects of Food Production on the Environment. Accessed from <http://www.landroots.org.uk/>

**Effects of Food Production on the Environment Total: \_\_\_\_\_/12**

**Question One – after reading the article summarise its main message in a sentence. (2 marks)**

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**Question Two – Cause and effect match the cause of the problems food production creates with its effects on environment and the proposed solution. (4 marks)**

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| --- | --- | --- |
| **Cause** | **Effect** | **Solution** |
| . | Contamination of drinking water and decreases in air quality. |  |
| Carbon dioxide and gas emissions produced by meat farms. |  | Reduce the amount of meat produced, substitute meat products for products that produce less carbon dioxide emissions. |
| Loss of habitat and extinction of wildlife species. |  | Reduce the amount of land being cleared for farming purposes. |

**Question Three – Statistics - find the statistics that match the statements below (3 marks)**

1. Estimated percentage of total carbon dioxide emissions that the meat industry is responsible for. \_\_\_\_\_\_\_\_\_\_\_\_

2. Fraction of arable land used to produce animal feed. \_\_\_\_\_\_\_\_\_\_\_\_\_

3. Fraction of the earth’s surface used for grazing. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Question Four – Solutions (3 marks)**

After reading the article think of solutions that you could personally employ that would help reduce the negative effects that food production can have on the environment.

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