Faisal Eraiqat

Mr. Mangan

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| **Factor** **Shifting cultivation** |  | **Intensive beef production in South America** | **Extensive beef production by Masai tribe of East Africa** | **Intensive lamb farms in the UAE** | **Agricultural farms in the UAE** |
| **Inputs**  | Eg fertilizer, water, pest control, labor, seed (GM or not), breeding stock, livestock growth promoters | More capital and labor  | More cattle with fewer workers, and requires more to increase total output | More labor and a lot of plants needed to grow the animals and growth promoters | Pest-resistant seeds, fertilizers, water, labor, machinery |
| **Outputs** | Food quality, yield, pollutants, transportation, processing, packaging. | Less beef but rigorous, more yield than in extensive, cheaper, better quality | More beef with less time constraints, not the best quality, tribes are typically together and easier to distribute | Meat, waste, some pollutants, transportation costs | Plants, sources for other foods, packaging costs, pollutants from any non natural help |
| **System characteristics** | DiversitySustainability  | Inefficient, hurts environment more with greenhouse gasses | More efficient and low impact | Less diverse and inefficient | Limited to the weather, more efficient |
| **Environmental Impacts** | PollutionHabitat lossBiodiversity lossSoil erosion/degradationDesertificationDisease epidemics | Negative impacts with more greenhouse gasses and fertilizers used with more waste | Low impact with nature controlling everything, overgrazing, desertification | Waste from the animals and greenhouse gasses | Possible soil erosion, a lot of water with little rain, eutrophication |
| **Socio-economic factors** | Subsistence or for sale cropTraditional or commercialFor export or local consumptionFor quality or quantity | Commercial and typically for exporting and is about quality | Quantity is more important, for consumption | For money and consumed internally, quality | Quality and quantity, some exported but a small amount and the rest are consumed |

5.2 Research Skills

1. Repeat with another example of two named food production systems local to you.
2. For each system, evaluate the environmental impacts.

The intensive beef, similar to the lamb in the UAE, hurt the environment the most as they release the most greenhouse gasses and produce waste, which is not sustainable. The one in the UAE uses growth hormones which makes it worse as they release more chemicals. Next is the agriculture in the UAE as they use fertilizers, which can pollute any nearby bodies of water, and this could possible lead to eutrophication. The one with the least impact is the beef in East Africa as they use only natural processes to grow crops and minimized waste.