

Mark Yeh

West Career and Technical Academy

1200 IRR Draft

The production of animal products for consumption is one of the main causes of the global environment. According to a study, the European Union (EU) is estimated to account for 9.1% of total EU emissions, and if considering land use and land use change emissions, it accounts for 12.8% (Weiss and Leip, 2012). The main strategies to eliminate the adverse environmental impact of livestock production include changing feed, improving manure management, and breeding animals with a higher feed-to-food ratio. In order to achieve greater growth, new methods of meat production will be required, and more and more people will choose vegan food. However, current trends indicate that by 2050, global meat consumption will increase rather than decrease. To solve this problem, recent tests and ideas have had to lead to laboratory production or cultivated meat.

The impact of laboratory-grown animals on the environment comes from the notion that eating and raising animal food has a terrible impact on the environment. As a result, laboratory-grown meat becomes a solution to prevent methane waste produced by livestock. Data on the environmental impact of farmed meat production comes from Tuomisto and Teixeira de Mattos. The farmed meat production process used in the study produced a product because the production technology for steak products is still under development. Cyanobacteria are thought to be cultivated in open concrete ponds. After harvesting, the cyanobacterial biomass is sterilized and hydrolyzed to break down the cells. Stem cells are taken from animal embryos. At a conference on LCA held in the agricultural and food sector in Rennes, France, in October 2012, a small percentage of these cells was sufficient to feed the world. However, the differentiation products of these stem cells, such as muscle cells, have a limited proliferation period. Embryonic stem cells can produce more than 1,000 kg of cultured meat, so the effects related to stem cell production are not included in this study. Engineered *E. coli* bacteria are used to produce specific growth factors to induce stem cells to differentiate into multiple muscle cells. Production of raw materials and

fuels, production of raw materials and growth of muscle cells. The impact of waste management is not allocated to farmed meat because it is assumed that waste will be used in other business processes.

Compare the results of laboratory meat production with livestock meat. Waste animal products, energy and water use from different sectors. The conclusion is that the actual weight of the animal meat indicates that part of the animal is edible. Economic allocation is used to distinguish the effects of edible and inedible parts of animals. The inedible part of the animal accounts for about 10% of the market value of the animal, and 70% of the whole animal produced is considered the edible part. Studies have shown that the weight and differences between various meats and how much waste is not required.