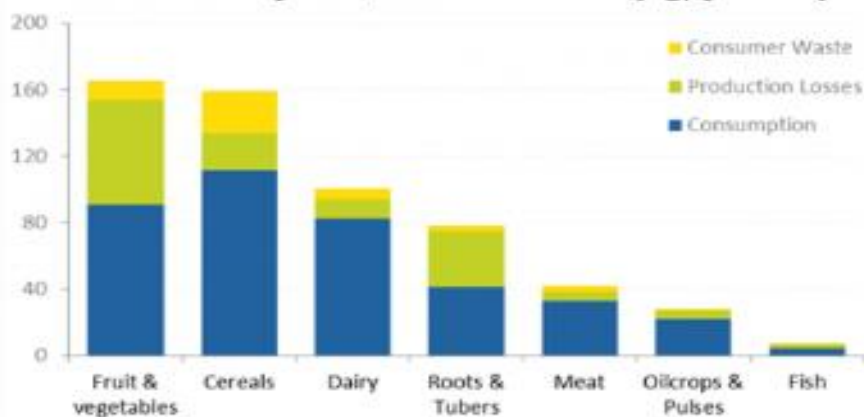


Sustainable Environments From Unprocessed Foods

Processing food products within the dairy industry requires large amounts of water, disrupting the ecosystem's water cycle. This water is used to flush the machinery and filter the whey proteins from newly formed cheeses. The water used to process milk and cheese products has a significant impact on the water supply, as water from dairy farms creates significant sewage, polluting the water on all levels of the ecosystem. This waste is more difficult to degrade than typical sewage, and can overwhelm sewage plants when a large volume is "flushed" from a plant. (Kroyer, G. (1995))

Food consumption, loss and waste (kg/person)



The energy lost to consumer waste, production losses and consumption.

Due to its heavy organic load and large total national volume, water waste from meat processing plants is difficult to biologically process, especially if not treated before it is put into rivers. It causes rapid oxygen depletion of the water, which naturally harms aquatic life. Additionally, it creates unpleasant odors, sludge and floating scum. (Kroyer, G. (1995))

Large amounts of fruit and vegetable processing wastes are produced from packaging plants, canneries, freezing and drying operations, etc., which are derived from similar processes, namely washing, peeling, blanching, transport, and sterilization. These wastes are characterized by chemical constituents, such as carbohydrates, starches, pectins, etc. These wastes require more energy to be biologically degraded than domestic waste. Because unusable portions of the plants is removed at the processing plants, this energy cannot return to the ecosystem it originated in, and instead require further energy from human sources to breakdown. (Kroyer, G. (1995))

Food packing has a large impact on many parts of the ecosystem. Many processed foods are packaged for convenience, with lack of care to what happened before or after the food is eaten. Energy from fossil fuels is required to manufacture the packaging materials, enclose the food product in it, and transport the final product to stores. Pollution is caused in the creation of many common packaging materials, such as plastic, and additional pollution can be caused post-consumption, when the discarded packaging releases chemicals into ground and water systems. (Kroyer, G. (1995))



Kroyer, G. (1995). Impact of food processing on the environment—an overview. *LWT - Food Science and Technology*, 28(6), 547-552. doi:10.1016/0023-8438(95)90000-4

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