



Stadium Pollution

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Stadium Attendance

- Over 170 million people attend professional sporting events in the United States annually
- 48 million attend college games every year

POLLUTION STADIUMS CREATE

- The average NFL game has about 60,000 people attend and about 20,000 cars
- With the amount of cars at sporting events there is a lot of smog
- The parking lots alone can create spikes in ozone pollution through smog

Amount of trash in stadiums

- Each year sports stadiums generate about 39 million pounds of trash per year
- Safeco Field generates around 7% of this total alone

What does this create?

- A huge buildup in trash can cause man problems
- Many stadiums are near wildlife locations
- At&t park and Safeco park are both located on bays



Why we need to take action

- Animal habitats are being destroyed
- We are causing harm to the earth

Our solution

- Step 1: biodegradable plastic bags on the backs of every seat
- Step 2: Bio plastic containers/food trays
- Step 3: this trash will go to a facility to be broken down
- Step 4: this facility will be in the place of part of parking lots
- These containers and bags contain Polylactide acid(PLA)

What is biodegradation?

- Process by which organic substances are decomposed by microorganisms into simpler substances such as carbon dioxide, water and ammonia
- Microorganisms involved are mainly aerobic bacteria, hydrocarbons, polychlorinated biphenyls, polyaromatic hydrocarbons, radionuclides and metals
- Biodegradation is made up into 4 phases

Phases of Biodegradation

Aerobic Phase: the plastics being to break down from hydrolysis

Anaerobic Phase: monomers are converted to fatty acids

Acetogenesis Phase: fatty acids turned into acetic acid CO_2 and hydrogen

Methanogenic phase: acetic acid is turned into methane and CO_2 . Hydrogen is consumed.

Why are normal plastics bad?

- Normal plastic production and decomposition releases harmful toxins
- Plastic water bottles take 3 times the amount of water to manufacture than it does to fill it
- Plastics take up 25% of dumps

How biodegradable plastics are good

- Biodegradable plastics are made of renewable materials
- When they are created and decomposed they don't release toxins
- They are easier to produce and require less energy
- By switching to biodegradable plastics we would be using less natural resources
- They are much cheaper

What will this solve?

- It will decrease the excess trash that sits around and that leaves the stadium
- It will also decrease the buildup in smog created by the many cars
- It will push more towards public transportation and carpools
- It will decrease the amount of trash going to landfills