Biopackaging

Introduction :

Hello everybody! We are students of Moretus, Belgium. We mostly specialize in science. We took the time (far from completed) to do some research in biopackaging. Our research isn't complete yet, but we thought that it was a good idea to give you guys a heads up of what we're doing. to end this introduction, here is a game plan of what we're going to do.

1. introduction.

2. Questions about what we what to research.

3. The actual research.

4. taking action.

5. review about our process.

6. epilogue.

Questions :

How much waste is there in the lifecycle of bio packaging?

How much energy is used to produce bio packaging, and is it green energy?

Does bio packaging have a closed water loop?

What makes biopackaging more enviromental friendly than normal packaging?

-> Where is it produced in Belgium?

-> To which degree is biopackaging able to biodegrade?

How can you reduce packaging while shopping for vegetables/fruit?

-> How can you do this yourself?

How can mass producers reduces packaging?

(**TO BE CONTINUED)**

Research :

- unfolding the term biopackaging.

-> Bioplastic is really a generic term. The word 'bio' may refer on the one hand to the biological origin of the material and on the other hand to the biological degradability of the material. However, both aspects are not necessarily related. There is waste, ofcourse, but it’s bio-degradeable. (Source : http://www.biopackpackaging.com/tailor-made/)

- First the three questions :

(How much waste is there in the lifecycle of bio packaging?

How much energy is used to produce bio packaging, and is it green energy?

Does bio packaging have a closed water loop?)

-> From this website we were able to globally answer these questions. we could learn from this that biopackaging is at the moment a good alternative for plastic, because ;

· from bio based, renewable sources

· in a clean production process with no waste, a closed water loop and with green energy,

· a compostable / recyclable product.

The same website tells us also that the BioPack factory in Groningen is equipped with a clean and sustainable production process with no waste. Our closed water loop ensures minimal use of water and energy.Sustainable forestry is one of the most effective ways to mitigate climate change and store CO2. All BioPack products are made from Cellulose from FSC managed circular forests in Sweden. -> no water loops!, no waste!, clean production process!, sustainable!

- What makes biopackaging more environmental friendly than normal packaging?

- Where is it produced in Belgium?
- Based on Belgium there aren't a lot of businesses that created there products local. I was able to find a few Belgian businesses within this sector, but they didn't add the information on where there products are made. So I guess this is quiete normal that it is so hard to find specific information about biopackaging, because it is a new concept that still has to make a big impact on our daily lifes. Plus it has to 'beat' there main competitor within this sector,namely the normal packaging. These businesses do talk about how you could trust them that there biopackaging is exactly what they are saying, so they are completly biodegradable and are made with care for nature, health and evironment.
- I also found a Dutch business for biopackaging that has headquateres all around the world, namely paperfoam. I do find this one interesing, because it has headquarters in the USA, The Netherlands, Germany, China and Malaysia. The last to countries I thought were very remarkable. You see today that the enormous companies have there products created in the low-wage countries to make more profit and China and Malaysia are two of those low-wage countries. So I thought it was weird that they are a part of this company(paperfoam), they don't specific talk about it but I think it is very possible that they do the same as these large companies: create there products there and let them make by underpayed workers.
- So a conclusion might bet hat biopackaging-focused companies do see that there products are completly biodegradable and are made with care fort he environment but maybe still not with care for the workers.
- But that doesn't mean that there aren't companies who are 100% green/clean. I found a Swedish/Dutch company that uses only local organic materials and make them localy. So the materials come from Sweden and the products are created in the Netherlands.

- to which degree is bio-packaging able to biodegrade?

- First let's look in dept tot he term biodegrade. It meanse that the product is completly compostable and is made from organic materials.
- All the biopackages are according to their businesses 100% biodegradeble.
- Conclusion for the main question:
- Biopackaging is about using organic composable materials that you can reuse afterwards to created new raw materials. These sort of packaging must be able to contain the products it is packaging as long as the normal plastic packaging can.

- Sources:
- For subquestion 1
- Belgian biopackaging:(https://biodp.eu/over-ons/)
- Paperfoam:(https://www.paperfoam.com/)
- Swedish/Dutch company:(http://www.biopackpackaging.com/about/)

- For subquestion 2
- Belgian biopackaging:(https://biodp.eu/over-ons/)
- Swedish/Dutch company(http://www.biopackpackaging.com/tailor-made/)

How can you reduce packaging while shopping for vegetables, fruit?

Many grocery stores pre-package their fruit and vegetables in plastic and give you plastic bags for loose items. There are easy other ways to help reducing your impact on the environment. The first thing you should do is refuse the pre-packaged vegetables and fruit. It is way better to buy the loose pieces of fruits and vegetables instead of the pre-packaged ones because with the pre-packaged ones you are forced to buy plastic to.

Search for your fruit and vegetables in a local grocery store or a farmer's market where everything is more environmentally friendly. There are also more Fairtrade products in a farmer's market. Now the most important thing you can do to make a change and to buy less plastic and make your groceries more environmentally friendly is to use your own bags. You can buy reusable grocery bags or just use bags that you already have at home. You can also take bags that you received from other stores when you purchased something over there. You can use this bag for several months if you take care of them and maybe even longer. This a big difference with the bags that are provided at the grocery store itself because we throw them away almost immediately.

How can you do this yourself?

You can try to influence your local grocery store and go tell them it is time to make a change. Give them some tips. For example: Use paper bags instead of plastic bags because paper is easier to reuse and to recycle than plastic. Buy only the loose objects and put the in your own reusable bags. Try to spread out he tips to all your friends and family members and motivate them to not buy the pre-packaged vegetables. And make them use or buy a reusable bag for their groceries. Tell them to spread this idea out even further and try to make up a group of conscious people that care about the environment and the oceans which are full of plastic because of the pre-packaged groceries and other products nowadays.

How can mass producers reduces packaging?

There are several options for mass producers to reduce the packaging of their products. A company that produces massive amounts of fruits and vegetables or other groceries often use to much plastic in their products. What they could try to reduce their use of plastic is to make a sort of cycle in which the products used for packaging return again and again and so on. By that I mean that for example the products used for packaging should be designed or created in a way that you don't want to throw them away, but you want to keep them or give them another function in your household. Maybe as some decoration piece or make a sort of collector's item that differs in each product you buy. Mostly children will want to collect these kinds of things. The parents or grandparents will then keep their packaging and give it to the children/grandchildren. And when they don't collect them anymore the company could for example create a place where you can trade this kind of packages for some promotions on the products they sell and by doing that they also got their packages back and they can start to recycle them.

Question 1 and 2:https://www.plasticfreejuly.org/get-involved/what-you-can-do/fruit-and-vegetables/

Question 3 own ideas and a bit of inspiration by: https://www.thinkstep.com/blog/top-9-sustainable-packaging-trends-2019

-> research TO BE CONTINUED.

General conclusion :

Currently, bioplastics still only represent well under one per cent of the about 335 million tonnes of plastic produced annually. (source:http://belgianbiopackaging.be/) There's an enormous room for improvement there. The biggest downside is the limited shelf life.

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