

## New and sustainable trends in food packaging: edible packaging

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### FOOD PACKAGING

Packaging is one of the main processes for preserving and maintaining the quality of food products for distribution, storage and final consumption. It contains the food, and is responsible for ensuring freshness, flavor and nutritional value.



The use of packaging based on polymers derived from fossil fuels, such as PVC, PET, PP, PE, PS, PA, among others, has increased in recent years, generating serious environmental problems. These materials are environmentally unfriendly, and come from non-renewable and non-biodegradable sources, ending up in landfills or in the oceans.

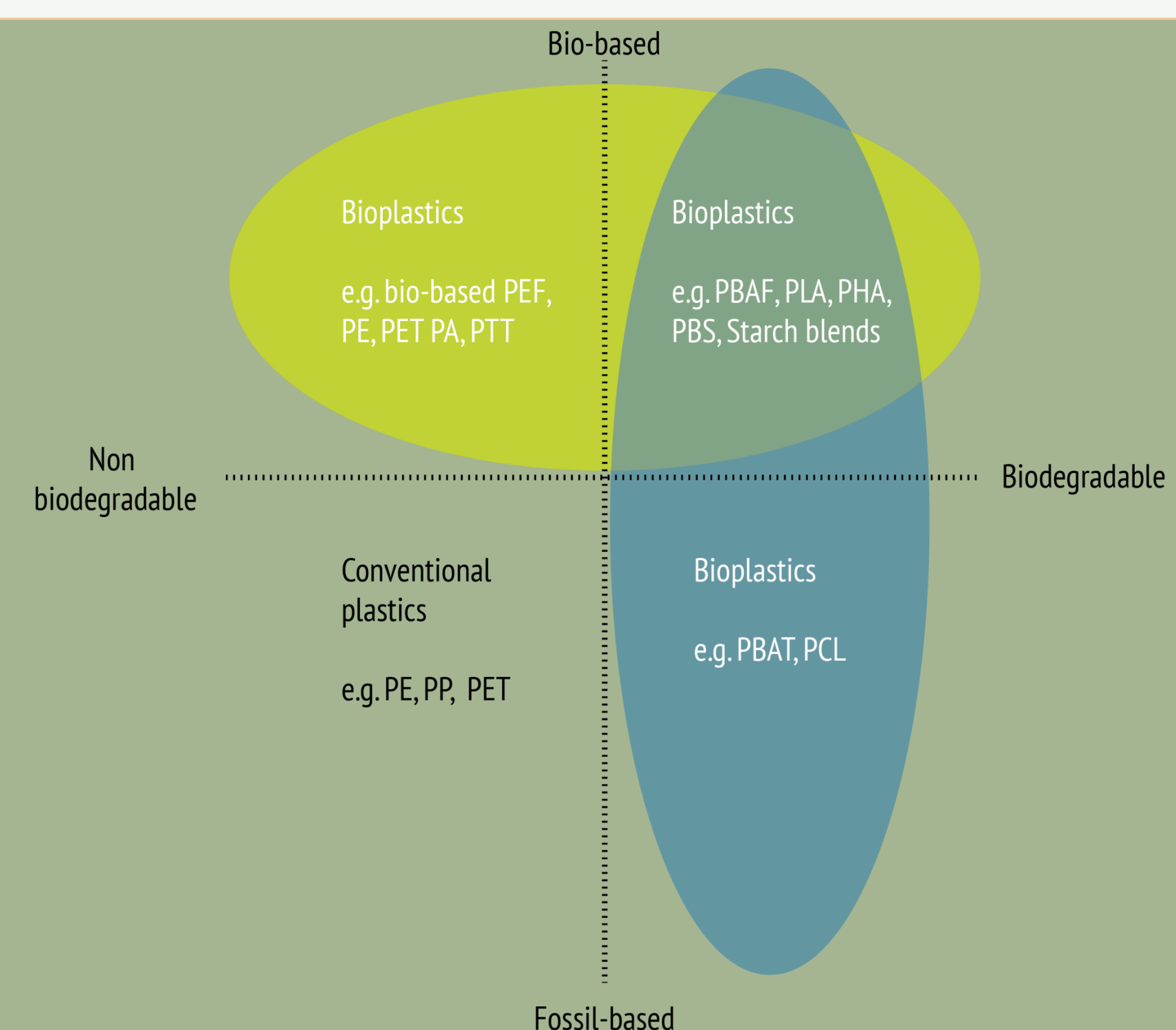


The agri-food sector has focused on the development of improved preservation techniques that effectively slow down food spoilage and maintain food quality throughout the shelf-life.



Edible food packaging are formulated from bio-based and biodegradable materials can be categorized into three categories based on the sources from which they originate:

- Materials developed from direct biomass/natural sources (proteins, polysaccharides, and lipids)
- Materials produced by microorganisms/microbial fermentation (PHA)
- Materials produced from bio-based monomers (PLA, PF, PS)



### CONCLUSION

It is essential that the quality and safety of foods is guaranteed and monitored throughout its shelf-life, using innovative, fast, economical, non-destructive, and sustainable food preservation technologies that reduce the production of fossil-based plastic waste. The use of edible packaging will add value to food products, extend their shelf-life, and maintain their safety and quality. Further studies should continue to develop more edible film and coating technologies, considering the optimization of bio-based packaging and allowing the exploitation of the valorization potential of by-products from the forestry and agri-food sectors, contributing to the bioeconomy.