

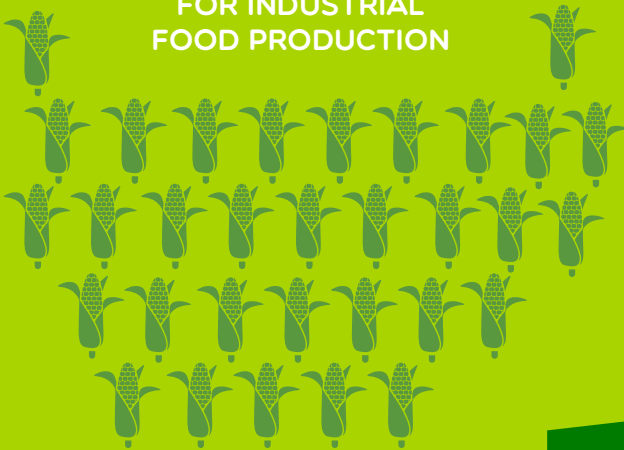


MATER-BI

# BIOPLASTICS AND CROPS A FALSE PROBLEM



## CROPS USED FOR INDUSTRIAL FOOD PRODUCTION



## CROPS USED FOR BIOPLASTICS



MATER-BI is a family of fully **biodegradable and compostable** bioplastics which use renewable resources to provide a solution with low environmental impact and to solve specific environmental problems in various sectors, such as foodservice, packaging and separate collection of organic waste.

## MATER-BI CONTAINS

### CORN STARCH

- Not genetically modified
- Grown in Europe with traditional agricultural practices
- Deforested land or virgin soils are not used for its production.

### VEGETABLE OILS

The vegetable oils used for the production of the main raw materials in third generation MATER-BI come from non- transgenic crops other than palm and soya which require minimal irrigation.

## AGRICULTURAL LAND

The total amount of arable land is 5 billion hectares. It is estimated that in 2017 only 1.2 million hectares, corresponding to less than 0.02%, will be used for the production of bioplastics worldwide.

Source:  
[www.european-bioplastics.org](http://www.european-bioplastics.org)

## PRICE OF AGRICULTURAL PRODUCTS

The increase in the price of agricultural products since 2007 can be attributed to a number of different factors:

- growing demand from the biofuel industry
- increase in the price of crude oil and ensuing increase in the production costs of cereals
- growing demand and dietary changes in developing countries
- speculative interest of the markets
- exponential increase in world population

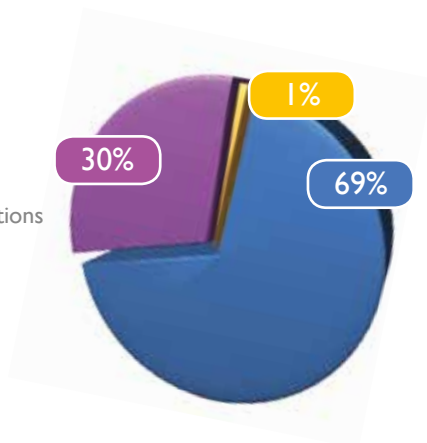
The production of bioplastics is not, therefore, one of the causes for the increase in the price of agricultural products.

Taken from:  
 "Bioplastics: a case study of bioeconomics in Italy", by Walter Ganapini, Milan, Edizioni Ambiente, 2012

## CORN STARCH

Each year in the EU alone, around 3,600,000 tonnes of corn starch are used for non food industrial production, around 46% of the total. 30% of this is used to make paper and corrugated cardboard, while bioplastics use 40,000 tonnes, corresponding to 1%.

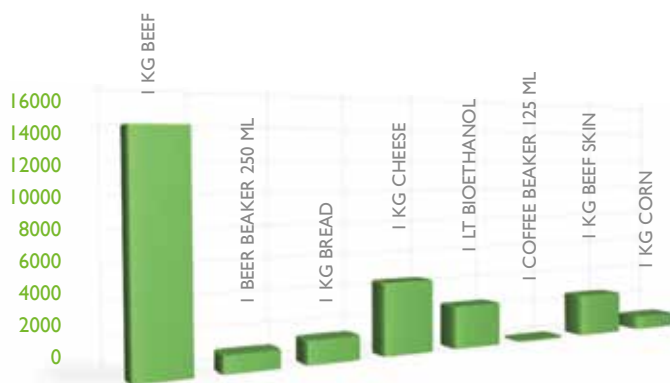
- Bioplastics
- Paper and corrugated cardboard
- Other non-food applications



Taken from:  
 "Bioplastics: a case study of bioeconomics in Italy", by Walter Ganapini, Milan, Edizioni Ambiente, 2012

## WATER

An average of 15-30 litres of irrigation water is needed to obtain the renewable raw materials needed to produce 1 kg of MATER-BI. What is the effect of the cultivation of corn on the planet's water resources (water footprint)?



● Waterfootprint

Source:  
[www.waterfootprint.org](http://www.waterfootprint.org)

The data show that the impact of bioplastics on food production is minimal, approaching zero.

MATER-BI bioplastic is part of the NOVAMONT biorefinery project, the philosophy behind this project being the creation of a Green Chemistry agro-industrial system, fully sustainable from the environmental, economic and social standpoints.

MATER-BI is certified as biodegradable and compostable. If disposed of in the wet waste fraction, it is converted into fertile, useful compost.  
[www.materbi.com](http://www.materbi.com)

