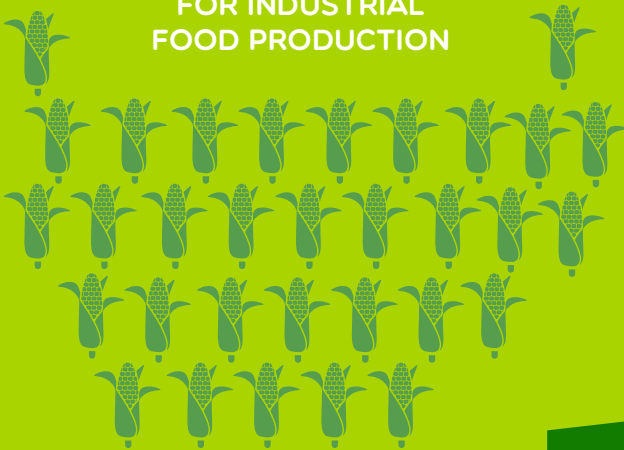


# BIOPLASTICS AND CROPS A FALSE PROBLEM



## 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 the 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:  
<http://en.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:

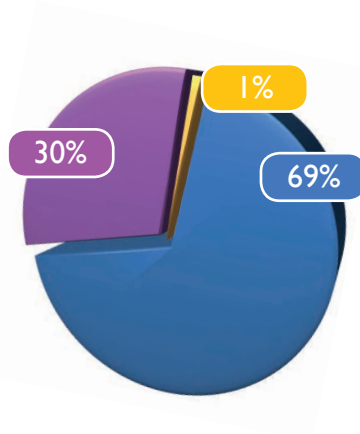
- growing demand from the biofuel industry
- increase in the price of crude oil and ensuing increase in the production costs of cereals
- growing demand and dietary changes in developing countries
- speculative interest of the markets
- exponential increase in world population

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

## 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%.

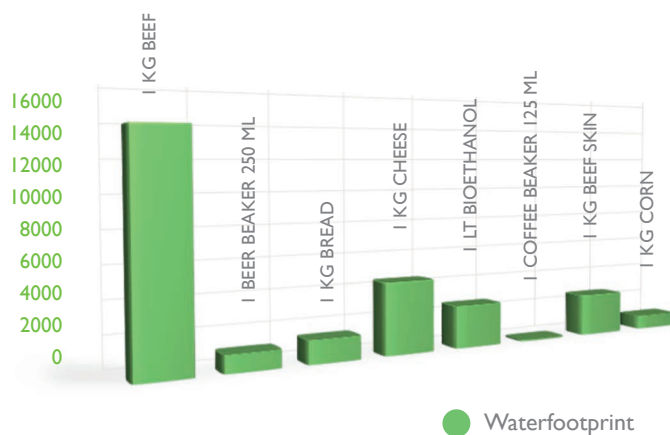
- Bioplastics
- Paper and corrugated cardboard
- Other non-food applications



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)?



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)

