Bionet : a solution for biodegradable and compostable flexible packaging

Marco Scoponi – COO

Advanced Polymer Materials Srl (APM)
Via saragat, 9 – 44122 Ferrara (Italy)
dirtec@apmlab.com - www.apmlab.com

Via Saragat, 9
41122 Ferrara
www.apmlab.com

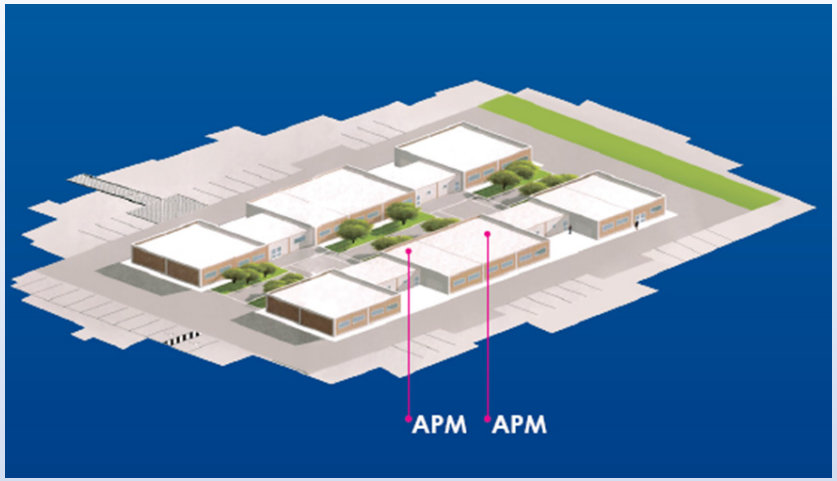
main business activities

quality control on raw materials and processing A

Industrial and development activities B

Technology Transfer C

Technical training D



Since November 2015 APM belongs to the high-tech network of the Emilia Romagna region as a laboratory for industrial research. APM has been part of the group of companies that have created the GreenTech cluster

Production of polymer specialties :

- Adesyl: Hot Melt adhesives and UV-curable adhesives (3D printing)
- BioRer: Blends of biodegradable and compostable thermoplastic polymers
- Lumex: materbatches of luminescent thermoplastic polymers
- Biostab: masterbatch of thermoplastic polymers with bacteriostatic activity

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Company strategy and vision in agreement with EU Life Projects and European Technology Platform for Suastainable chemistry

PRIORITIES

Resources and energy efficiency: All production processes can be conveniently optimized using renewable raw materials, recycled materials, biomasses and renewable energy sources to save as much as possible energy

Water: help improve use, treatment and develop sustainable water policies.

Raw materials: Four strategies are eco-sustainable solutions

- ***Reduce*** : rethinking the same application by using light weight polymers providing objects with the same performances
- ***Reuse***: allows a wide recovery of the materials used in the production phase (primary recycling)
- ***Recycle***: recycling polymer wastes and reinserting them as much as possible in existing production processes.
- ***Replace*** : replacing polymer commodities with a more sustainable biodegradable and compostable polymers with low environmental impact)!

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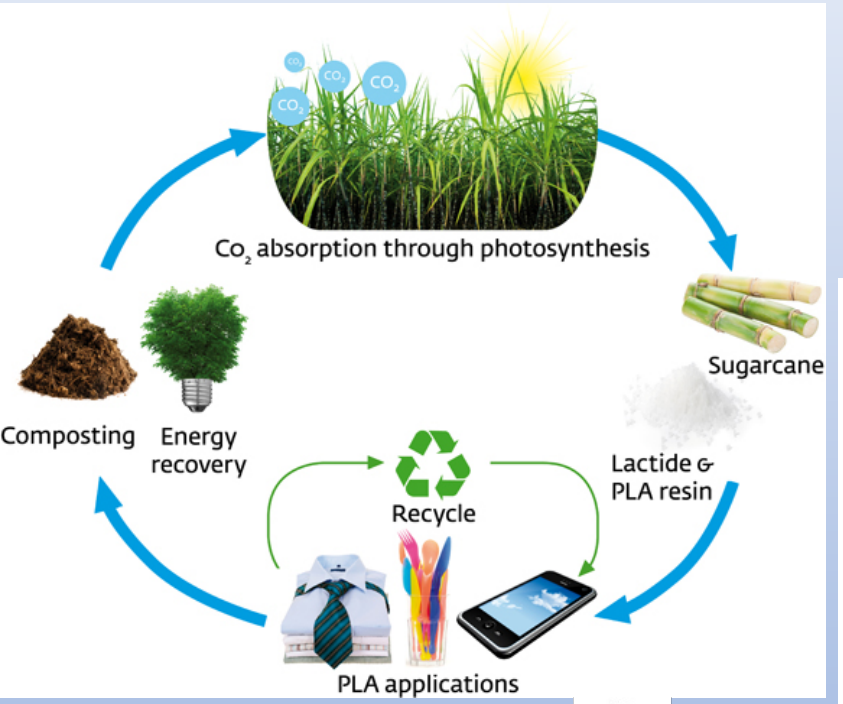
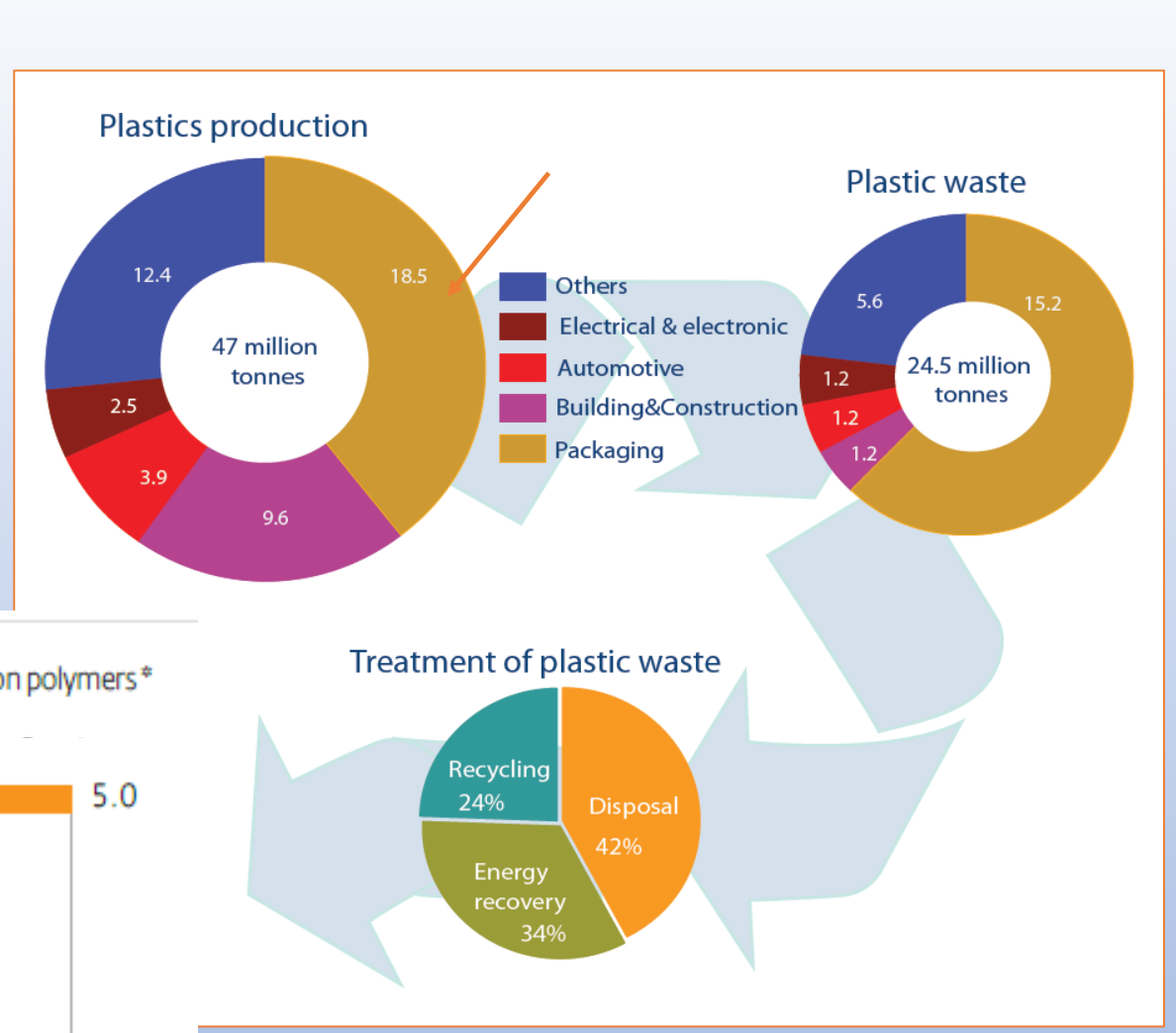
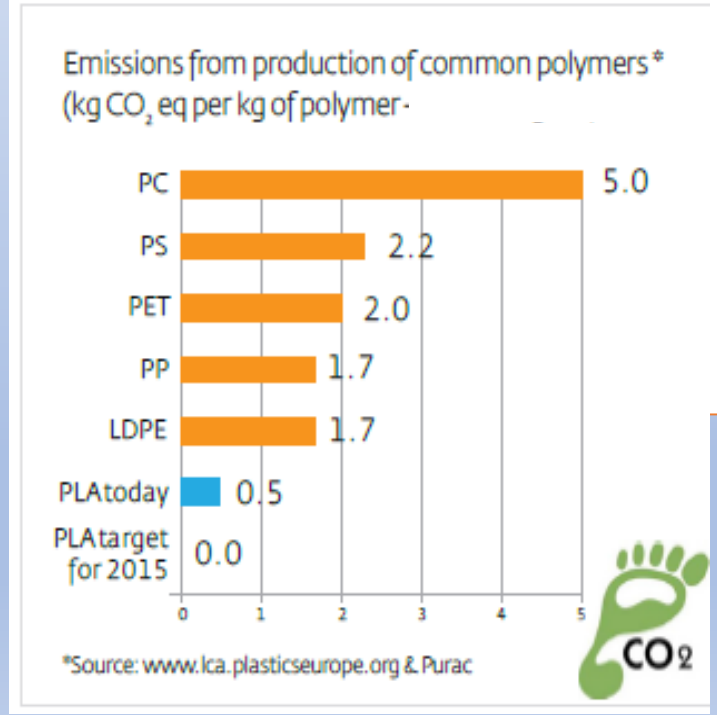
Most of the waste is made up of packaging having flexible short-lived life time, such as film trays, bottles and shoppers

The priority is to replace the commodities with biodegradable and compostable polymer derived from natural resources







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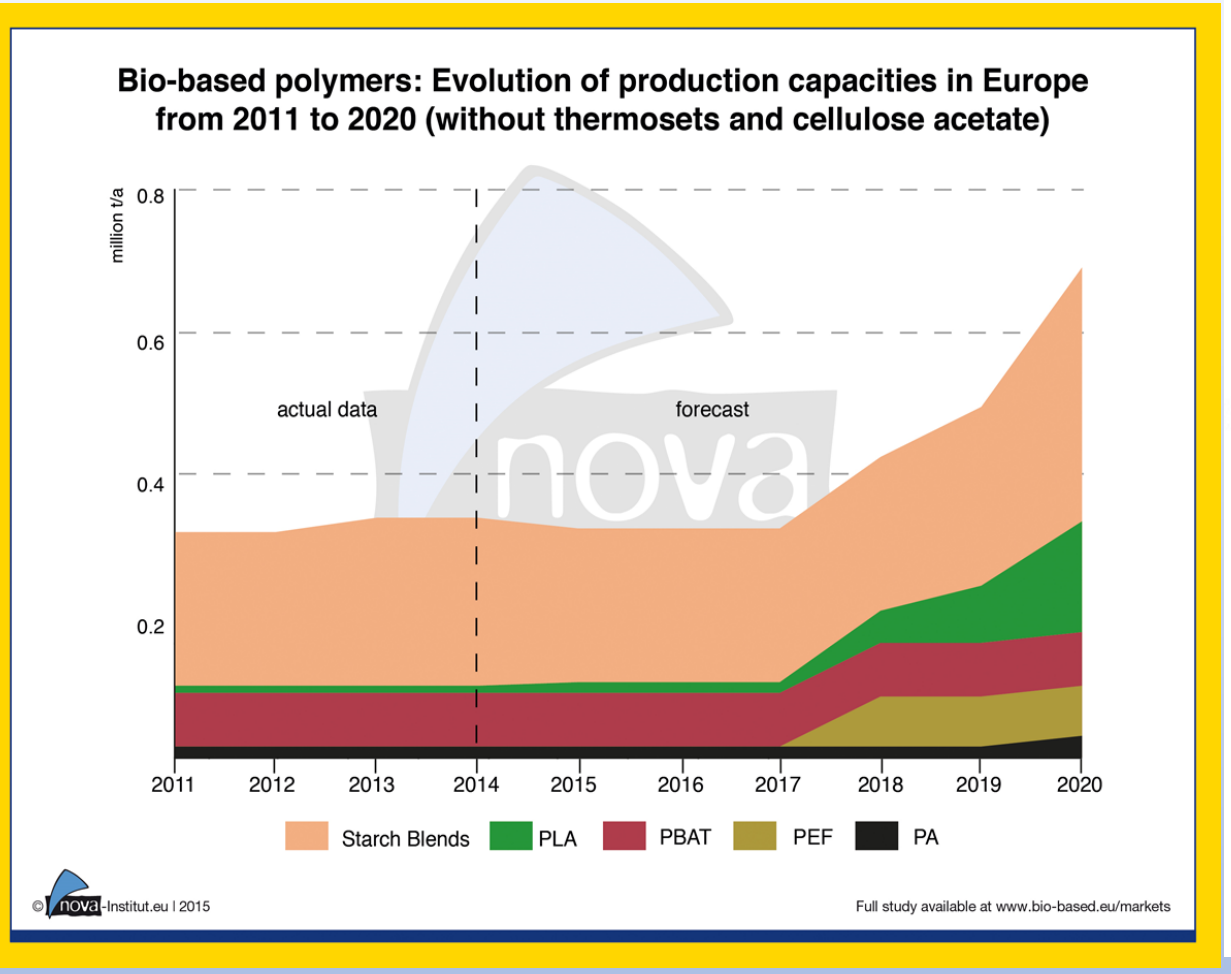
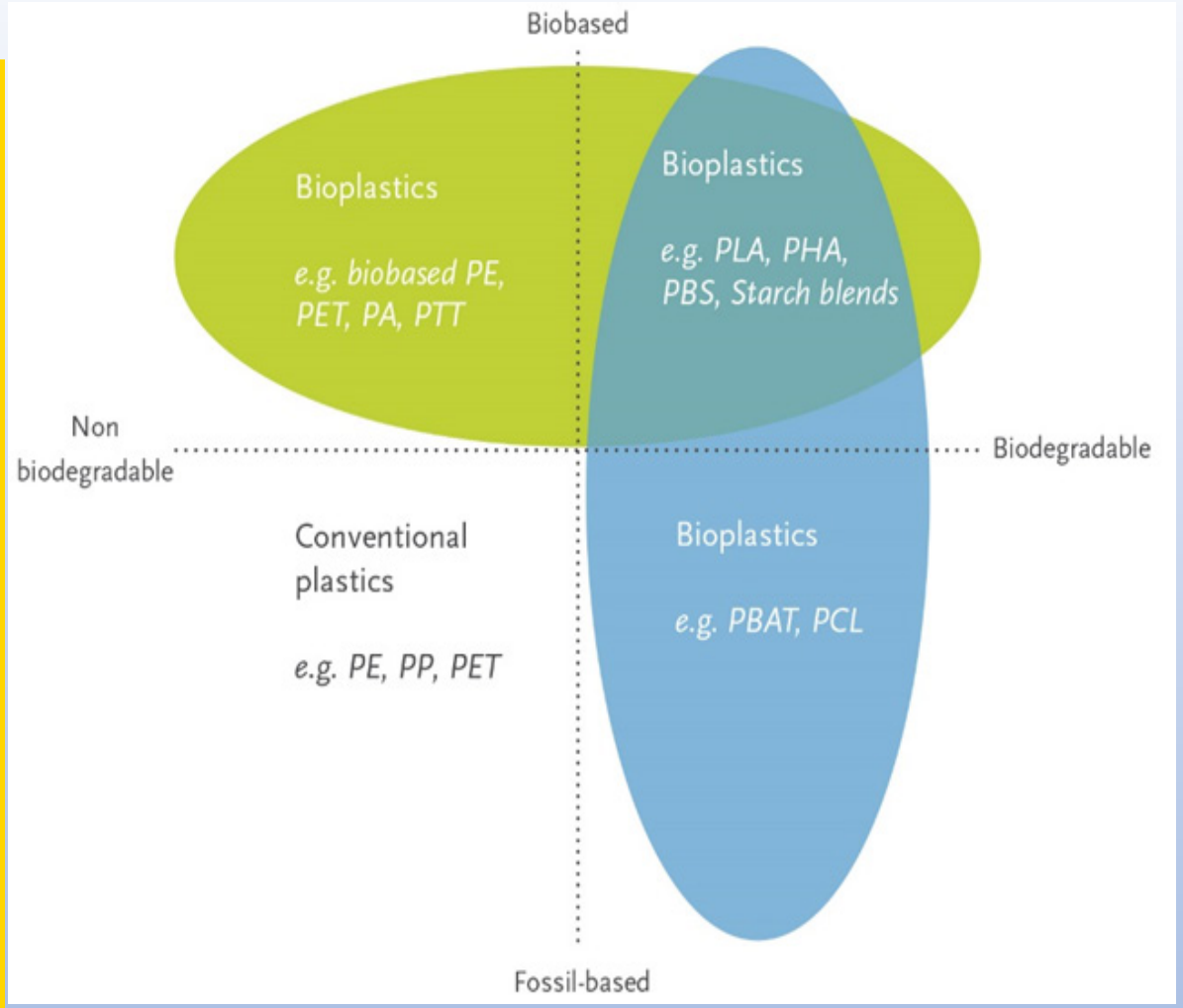
Biodegradable and compostable polymers (Bioplastics)





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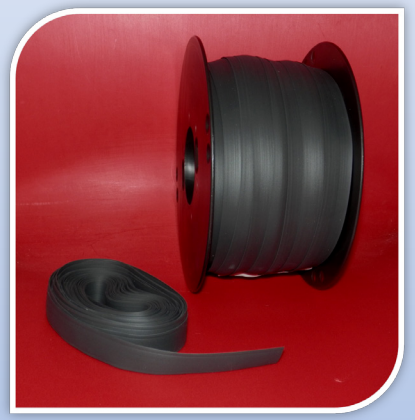
Adesyl-ClearUV



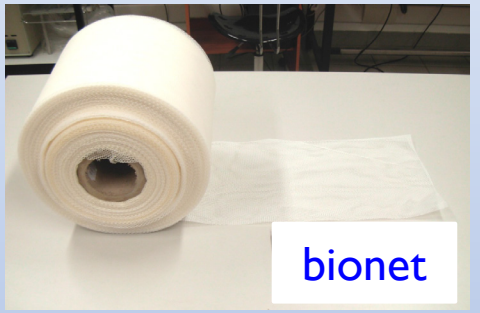
Adesyl HMA

Hot melt adhesives for glass and metal surfaces

BioReR: polymer blends with biodegradable and compostable polymers derived from renewable resosurces

bioStab: Bacteriostatic masterbatches in termoplastic polymers

Lumex_MB : Masterbatches with luminescent agents in termoplastic polymers



Bionet: biodegradable and compostable nextruded nets

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Extruded bionets made of polymer materials are widely used as flexible packaging for fruits and vegetables.

With packaging machines, the label is applied by heat-sealing to the extruded net.

Today the extruded nets are produced in Polyethylene with a wide range of colors and weights. The packs on the market that use extruded nets are sold in reels with a length of 1000 meters with a density linear varying from 7 to 15 g / m.

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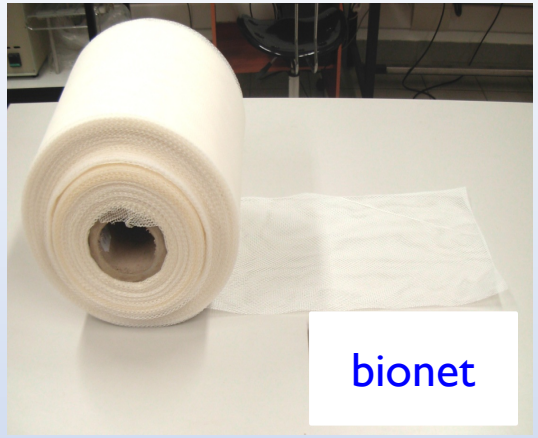

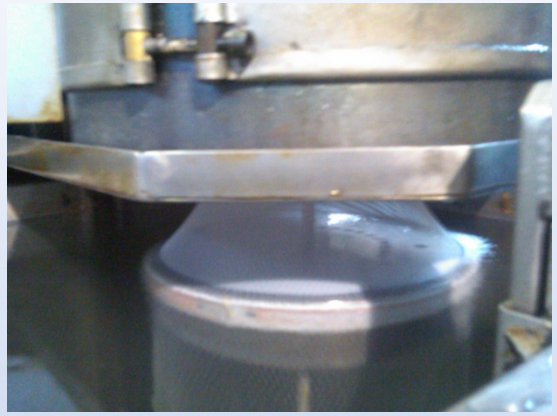

The advantages of BIONET are

i) Biodegradable and compostable

ii) Ideal for applications in food packaging and certified for contact with food;

iii) reduce waste management costs;

iv) important reduction in CO2 emissions per kg of product.

v) obtained from 100% by weight of renewable resources

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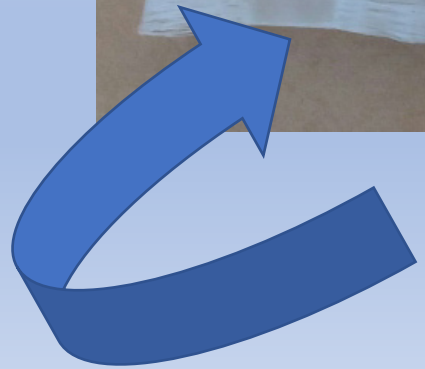
Coloured Bionet



Strips sealed at one edge : length 55 cm

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Future development: Biodegradable compostable shrinkable printable labels

The business group- biocluster

BIO cluster

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APM Srl possses the know-how for the preparation of polymer blends with biodegradable and compostable polymers for the production of extruded nets with conventional technologies. Furthermore APM carries out process and product quality control activities on biodegradable and compostables blends. (www.apmlab.com)

The production of biodegradable and compostable networks is entrusted to the company Marina Plastik of Comacchio (Fe), which has two lines for the production of extruded networks of networks with conventional thermoplastic polymers (PE and PP) for fish farming and food packaging. (Www.marinaplastik.it)

The company Bio-Pro Srl markets extruded nets produced under the Bionet brand for the sectors of packaging of fish, fruit and vegetable products and cured meats with the characteristics required by the GDO. (Www.bio-pro.srl)

Bionet

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"Now that we can tell time, I'd like to suggest that we begin imposing deadlines."

Thank for your attention !

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