

Session: Welcome and Opening
Presentation by: Jan Noordegraaf, *Synbra Technology bv*
Chairman of the BPM symposium 2018

Title: **Is there really a future for the Biobased economy in the Netherlands, one year later?**

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Curriculum:

Jan Noordegraaf is a cum laude graduate in Metallurgy of Delft Technical University and before joining Synbra Technology as Managing Director in 1999 he has held management positions in R&D, Quality Management, Operations Management and Sales and Marketing in The Netherlands, the United Kingdom and Germany.

He is a board member of the Dutch plastics and Rubber Federation NRK and has the portfolio Bio-Based.

Abstract:

After a welcome statement, recent developments in the bio-based economy will be highlighted and the effect of the current economic climate as well as the business environment in the Netherlands will be discussed. Main question that will be addressed is the discrepancy between the Paris Summit goals and the lack of implementation of even easy to implement measures in the Netherlands and indeed in many other countries. The status of the 10 points plan that was proposed to stimulate the bio-based economy will be reviewed again one year further than in 2017.

Developments in the Dutch BioBased economy

***Jan Noordegraaf
Synbra Technology***

A decorative graphic consisting of several glowing, semi-transparent spheres of varying sizes, connected by thin, white, curved lines that create a sense of motion and connectivity. The spheres and lines are set against a light green background with a subtle gradient.

Company introduction



BEWi

Synbra

GROUP

- Dutch holding of 13 companies;
- Synbra Technology supplies Expandable PolyStyrene (EPS);
- E.g. Isobouw, Synprodo convert EPS beads into foamed pearls and products;
- Focus on Sustainable Insulation Systems (SIS) and Industrial Products & Solutions (IPS);
- Synbra Technology is also center of Innovation.

Company introduction



BEWi

Synbra

GROUP

- *One company;*
- *Two sites for EPS raw material production (upstream);*
- *PLA and BioFoam in the Netherlands*
- *21 sites for EPS foaming and molding (downstream);*
- *Strategic collaboration in eastern Europe (Hirsch Porozell).*



Dutch Biobased economy is a clear point at the horizon But it does not come any closer



- Is Dutch industry policy is adequate?
- Brabant wanted to be a Biobased hotspot
- But BOM/ province NBr seem to have run out of steam, only biobased Delta continues.
- Limburg /Drenthe are active
- Belgium welcomes any industry
 - Wait for the next Avantium
- What does this mean for new bio-based businesses?

Some Innovations in 2017/18

Oerlemans Packaging breidt activiteiten uit met etiketten

19 maart 2018 om 12:08 uur - GENDEREN

Oerlemans gaat in te spelen op de circulaire economie



Corbion starts up PLA pilot plant in Thailand

By Plastics News Europe

SHARE



More News Technology & Materials Materials

Bioplastics company Total Corbion PLA, has started up its 1 kilotonne per annum (ktpa) pilot plant for production of poly lactic acid (PLA) and lactide monomers in Rayong, Thailand.

The pilot plant started up in December 2017 and over the past two months has produced a broad range of Luminy PLA resins, the company said in a 15 March statement.

The 50:50 joint venture between Total and Corbion for development of bioplastics was set up in the Netherlands in late 2016.



BIO4PACK

HOME OVER ONS PRODUCTEN

NIEUWS

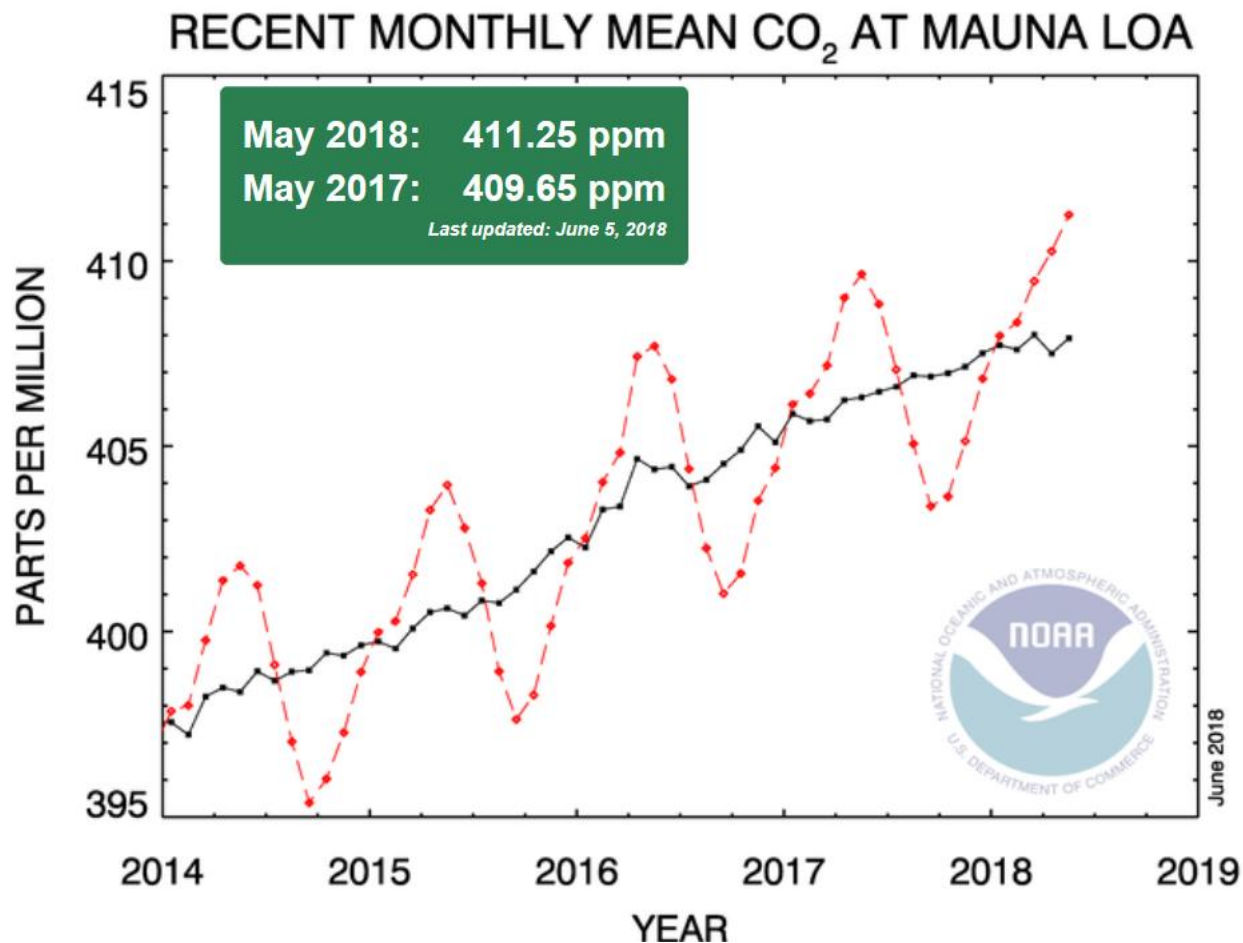
Composteerbare Vers-Vleesverpakkingen

Nu verkrijgbaar in diverse kleuren en formaten



CO2 Emission:

The New 400ppm World: CO2 Measurements at Mauna Loa Continues to Climb now at 412 PPM



What does a kg CO2 cost? From 4 to 18€/kg



The world we live in

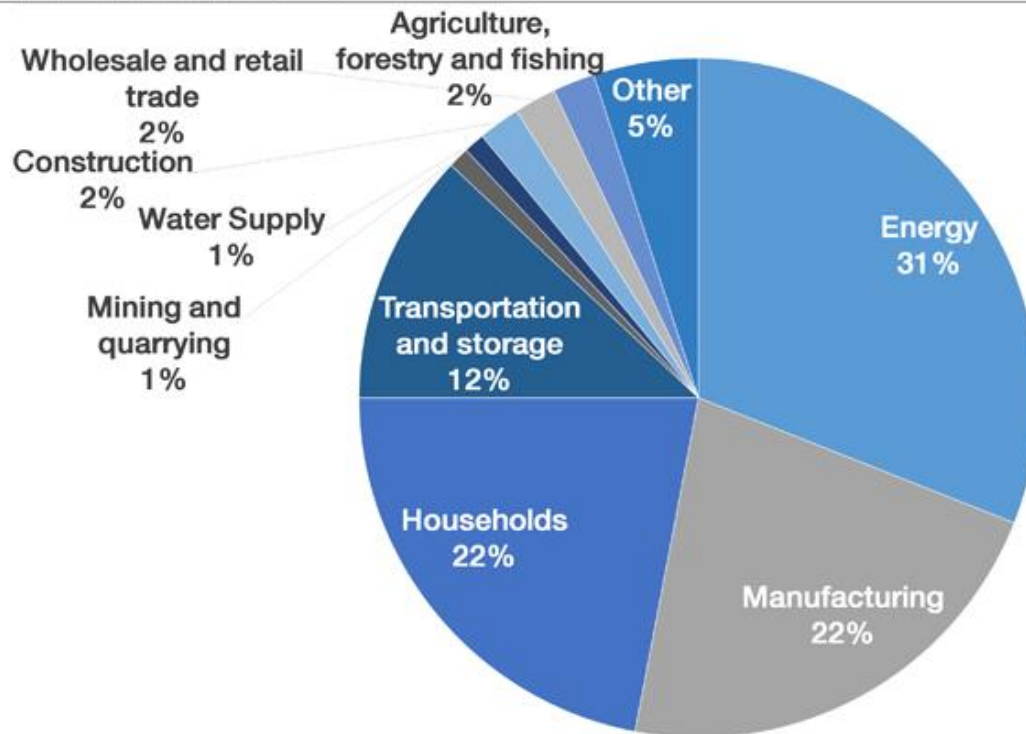
Microplastics vervuilen zelfs de meest afgelegen delen van de oceanen

12-02-18, 22.05u - Redactie - Bron: The Guardian



What are the sources of European CO₂ emissions?

OECD Environmental Statistics



Source: OECD

Solution?



- *Tax CO2 emission all materials incl polymers*
 - *NGOs and Shell propose it,*
 - *Why is the government still in doubt? <->EU*
 - *But for cars it is ok..*



- *Litter is not a plastics problem, but a mentality problem*
Draconian fines for littering , (works for speeding.)
 - *Examples: Iceland, Norway and Singapore*
 - *DNA analysis on side walk bottles and straws*

Brand owners serious on sustainability

Rethinking plastic packaging – towards a more circular economy

We want to move towards a more circular economy, so that more plastic packaging has the best possible opportunity to be reused or recycled



IKEA and India both pledge to abolish single-use plastics



Gunseli Yalcinkaya | 8 June 2018 | 2 comments

IKEA promotes closed-loop society

"By August 2020, all plastic material used in our home furnishing products will be 100 per cent renewable and/or recycled," reads its [sustainability statement](#) published yesterday, 7 June 2018.

The announcement forms part of a larger commitment to significantly improve IKEA's environmental impact. The company plans to completely overhaul its manufacturing processes so that only renewable, recyclable or recycled materials are used in its products.

The aim is to promote the [circular economy](#) – an approach where resources are kept in use for as long as possible, then recycled. IKEA's target is to "close at least two material loops" by 2020, in a bid to reduce customer waste.

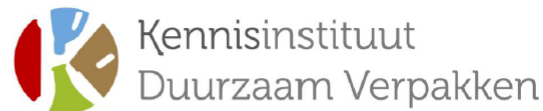


LEGO



KIDV has a solution(November 2016)

- KIDV labeling hesitantly introduced <5%
- Do the big retailers want to recycle
- Packaging Labels more paper than plastic
 - Circular packaging labels : Oerlemans



Weggooiwijzer

Richtlijn voor bedrijven voor het toepassen van weggooi-instructies

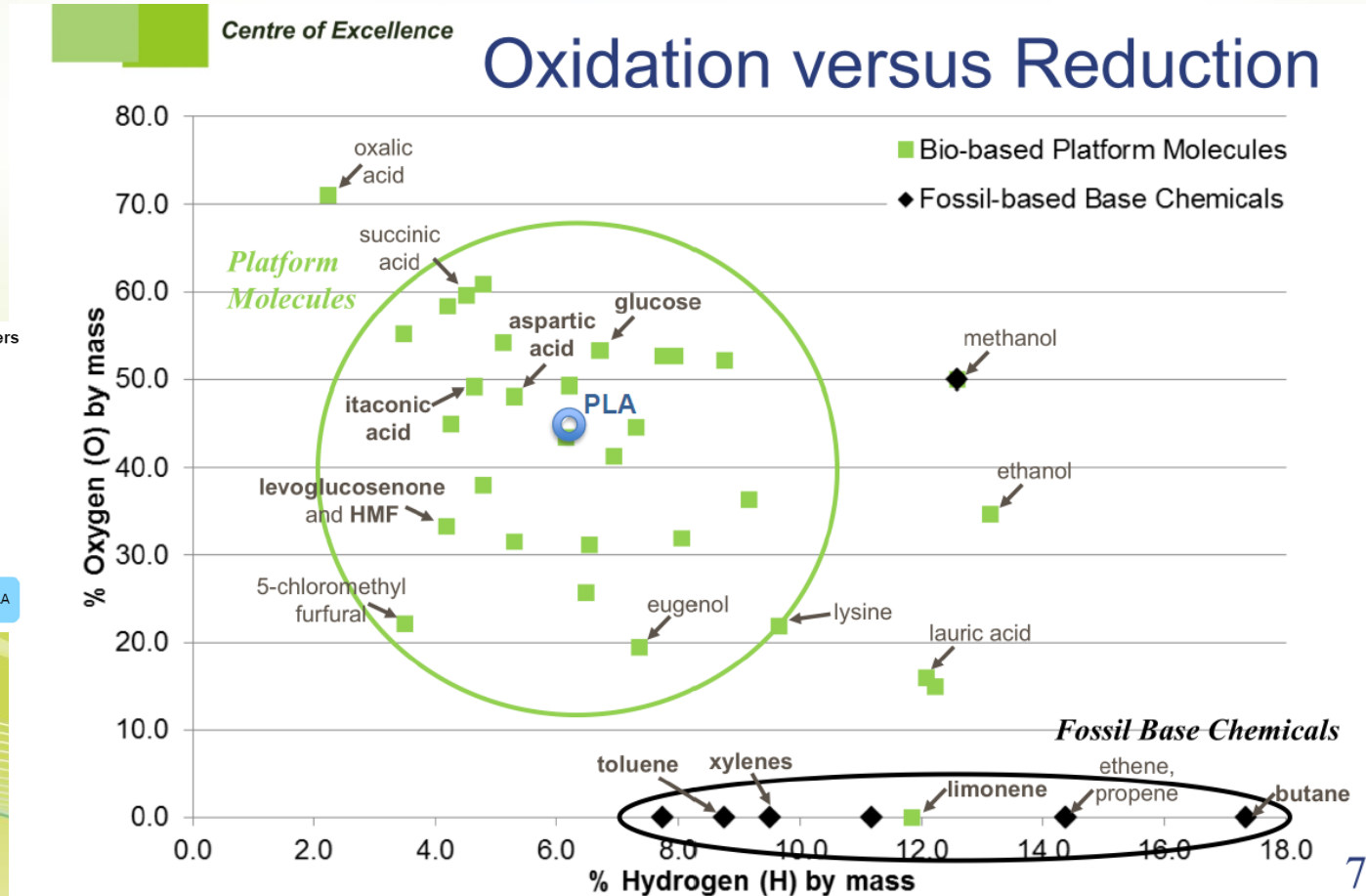
November 2016



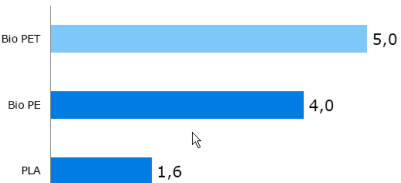
700000

Sustainability @ packaging

- PLA most sustainable polymer
- Bio-PE much less efficient than PLA



Fermentable sugars needed for production of bio polymers
kg fermentable sugar per kg of polymer – cradle to gate



Bio-PE and Bio-PET need 2.5 – 3 times MORE biomass than PLA

Source:

www.lca.plasticseurope.org and Int. Journal Life Cycle assessment, "LCA of the manufacture of lactide and PLA ..." 3 Aug 2010 PLA in 2015 is under development at Purac R&D

Biobased vs oilbased is like Trump vs Kim

- It is more difficult to get bio based to agree with oilbased
- Oilbased; bioplastics are bad for recycling
- Biobased up to 10% no issue
- Still no agreement after 6 years
- Oilbased against bio, but not PVC



Home composting value chain solution: Facilitate biobased market potential



HOT Compost BIN

HOTBIN is an innovative hot compost bin that super heats your food and garden waste to 60°C. Get rich mature compost in just 90 days, 32 times faster than a cold compost bin, it's easy to use, fast and there's no tumbling or rotating required.

 Designed in Morpeth
Made in the UK

[HOTBIN BASICS](#)

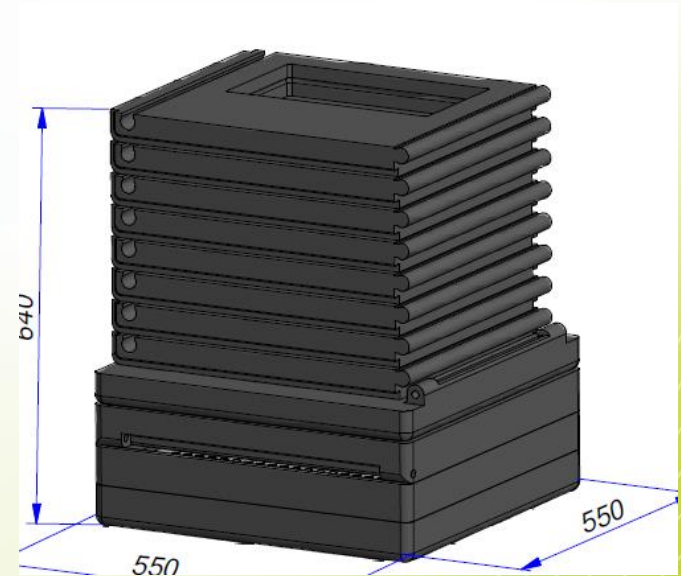
[HOTBIN SCIENCE](#)

[LEARN MORE](#)

[BUY NOW](#)

Facilitate the biobased market potential

- Patented clickable design
- Sell via webshop
- Sell as flatpack
- Supported by gardeners blogs
- Synbra to organise ww supply base



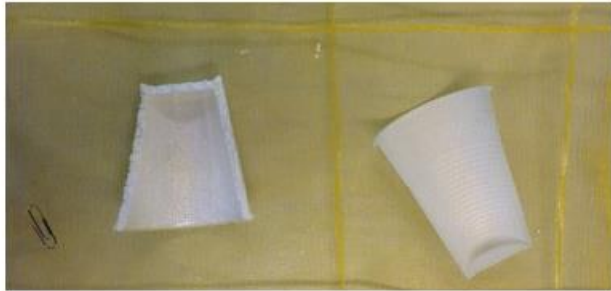
- Introduce as value chain solution Nov 2017

European bioplastics

- Already supported all major bioplastics producers (except1)

Hot bin and Foam cups

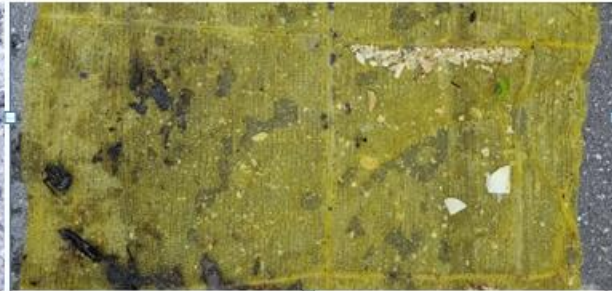
- Foam cups completely composted in hot bin in 6 weeks
- Bioware cups fragmented , but dit not compost yet in 6 weeks, Bioware is solid sc-PLA



Prior to test 30-6-2017



11-8-2017 before washing after washing ,
only the paperclip remains



All BioWare parts moved to the side of the nett ,

- Now starting: End of life at demo locations

Packaging tax in the Netherlands and EU

NL Packaging tax

Oil 0,64 bio 0,02 €/kg

Materiaalsoort	Tarief normaal 2016/2017/2018 €/kg excl. btw	Tarief bedrijfsverpakkers 2016/2017/2018 €/kg excl. btw	Tarief normaal 2013/2014/2015 €/kg excl. btw	Tarief bedrijfsverpakkers 2013/2014/2015 €/kg excl. btw
Glas	€ 0,0560	€ 0,0171	€ 0,0595	€ 0,0199
Papier/karton	€ 0,0220	€ 0,0110	€ 0,0233	€ 0,0134
Kunststof	€ 0,6400	€ 0,1222	€ 0,3876	€ 0,0790
Biodegradeerbaar kunststof*	€ 0,0200	€ 0,0106	€ 0,0212	€ 0,0130
Aluminium	€ 0,0200	€ 0,0106	€ 0,0212	€ 0,0130
Overige metalen	€ 0,0200	€ 0,0106	€ 0,0212	€ 0,0130
Hout	€ 0,0200	€ 0,0106	€ 0,0212	€ 0,0130
Andere materiaalsoorten	€ 0,0200	€ 0,0106	€ 0,0212	€ 0,0130
Algemeen tarief	€ 0,7700		€ 0,4700	

EU plastics Strategy

The pledge or 0,80€/kg or recycle 50% by 2025

*Commission's target of **all plastics being reusable or easily recyclable by 2030**. The direction is clear: unless we can demonstrate the ability and desire for total recyclability then applications will be selectively restricted. The EU Voluntary Pledge was presented in the EU Plastics Strategy as a means for industry to make public what it is prepared to achieve by 2025. This Pledge needs to be submitted by June 30th 2018.*

Scorecard for the 10 point BBE plan

	score 23-6-2016	1-6-2018
Remove obstacles		
1) Securing the generally accepted End of Life in the Dutch situation.	6 KIDV study completed	8 implemented
2) Acceptance into the green bin. still a few municipalities against , most are ok	8	8
3) Pursuit of ban oxofragmentable additives. Belgium and Italy lead	4	4
4) Valueate avoided CO2 emissions. CO2 € values extremely low	0	0
Clarify use of bioplastics		
5) Communication and labeling. seedling logo and a biobased content logo should bring more clarity.	8	9 KIDV
6) UseClear sustainability criteria	6	6
Encourage		
7) Sustainable procurement by Government purchasers say they have no choice and do not but	0	0
8) Inventory of incentives - important element of a green deal	0	0
9) time limited positive taxation of bioplastics VAT 21->6% for biobased per 1-1-17 /removal tax 0,02€/kg/oil based 0,64€/kg	4	4
10) Media campaign for bio-based packaging	0	0
average	3,6	3,9

Conclusion

- Still a lot to do

