

END-OF-LIFE VAN GEOTEXTIELEN

WAT KAN BIODEGRADATIE BIEDEN?

Sustainability of Geosynthetics
Mar-9-2023

Bruno De Wilde

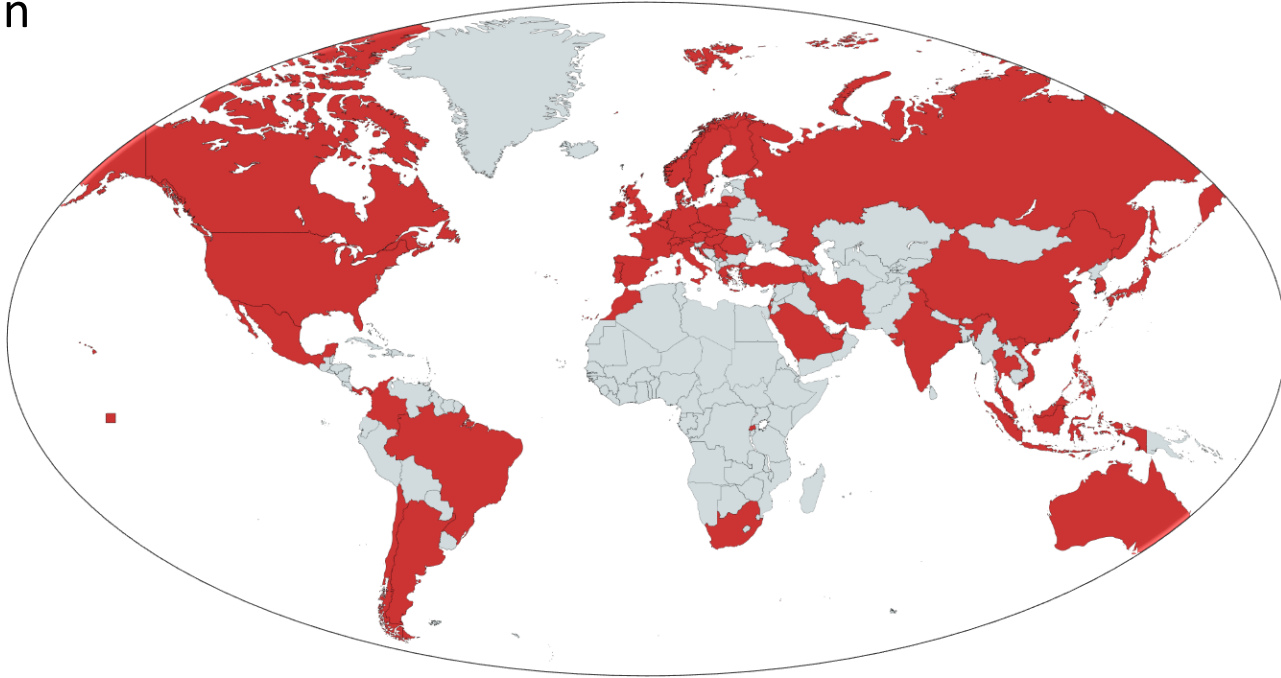


- Normec OWS
- Biodegradatie : wat is het en wat is het niet
- Biodegradatie in grond
- Enkele nuances m.b.t. biodegradatie
- Is biodegradatie van geotextiel zinvol ?

Founded in 1988, 35 years experience

105+ EMPLOYEES

Headquarters: Gent, Belgium
US Location: OWS Inc. Kettering, Ohio, USA
Partner: DJK International, Tokyo, Japan



‘One-stop’ laboratory for biodegradability & compostability testing

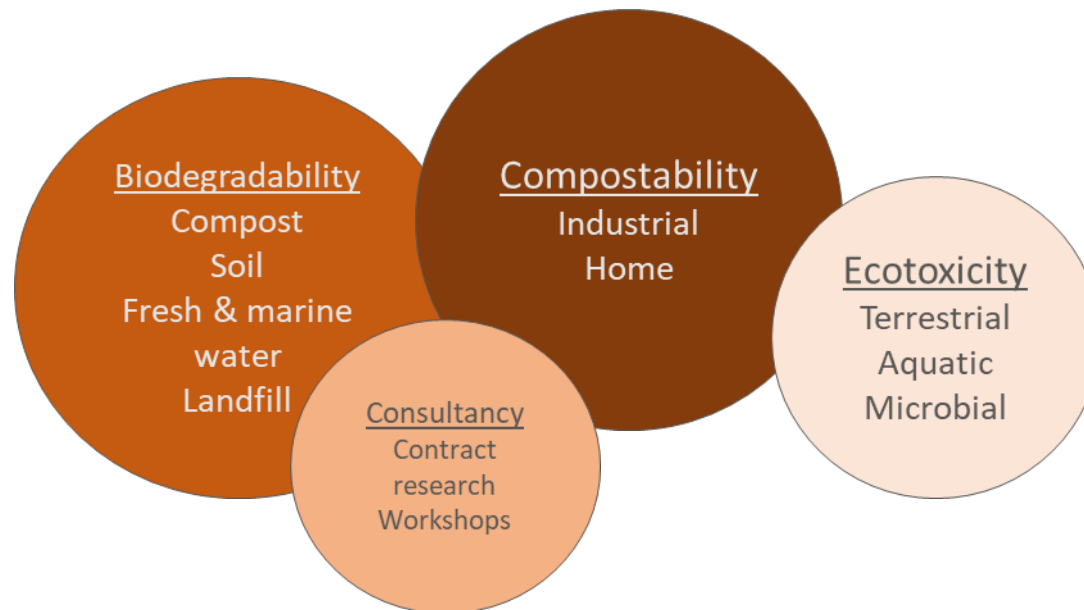
Strictly independent

Quality control: ISO 17025

Recognized by all certification bureaus worldwide

Active in standardization: ASTM/ISO/CEN

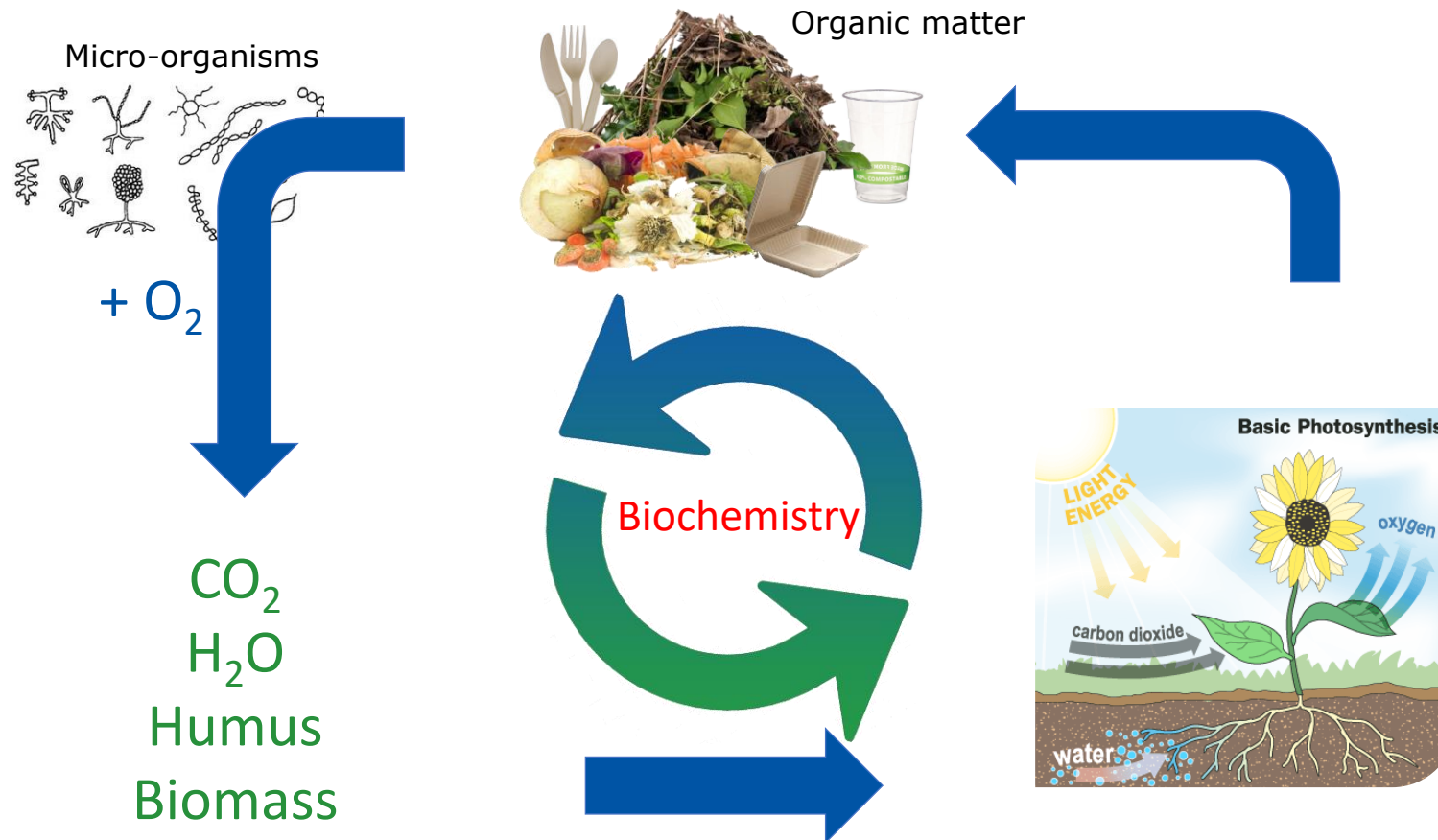
Member of several certification committees & industrial associations (BPI, EuBP, BBP, ...)



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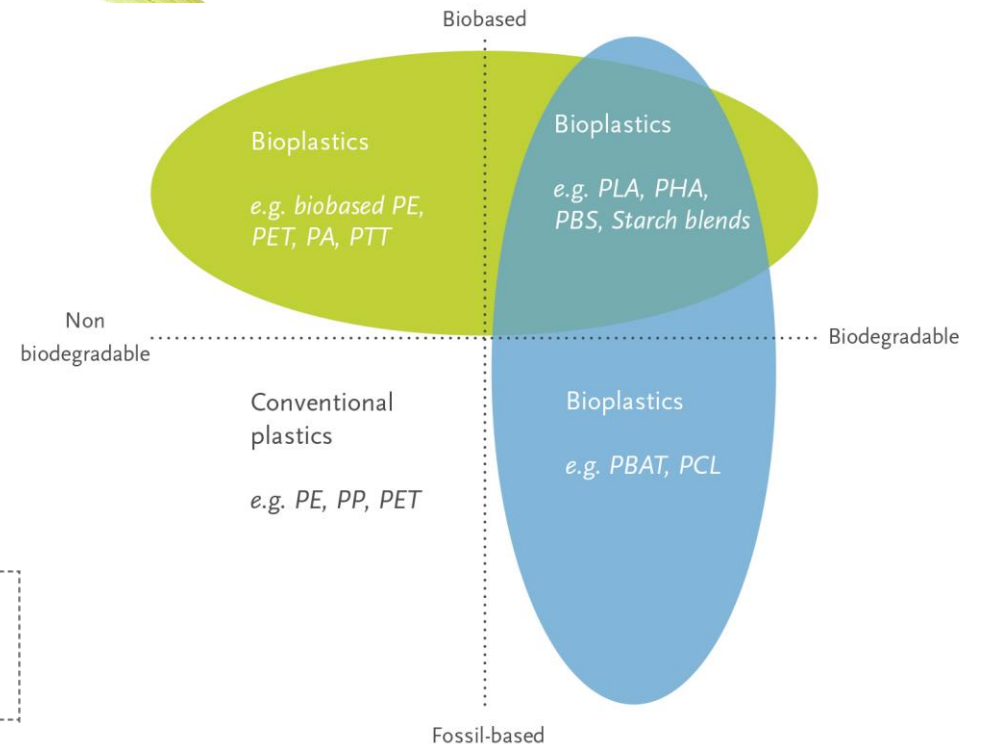
BIODEGRADATIE

- Omzetting van organische materialen tot mineralen, water en biomassa

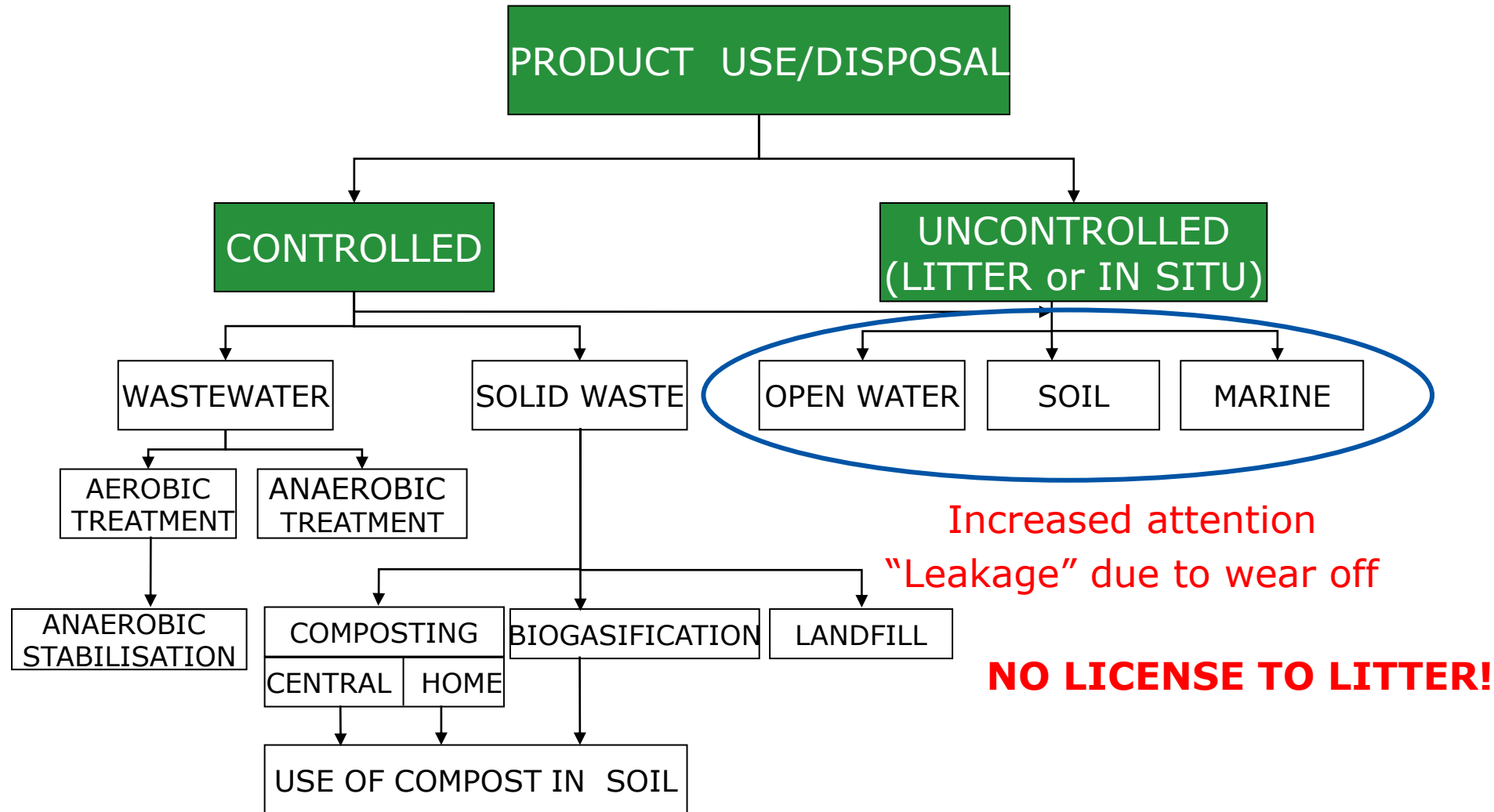


BIO-BEGINNING \neq BIO-END OF LIFE

- What is a bioplastic ???
 - Coming FROM Bio
 - Going TO Bio
 - Coming FROM AND going TO Bio
- Biobased \neq biodegradable
- Petrobased \neq non-biodegradable



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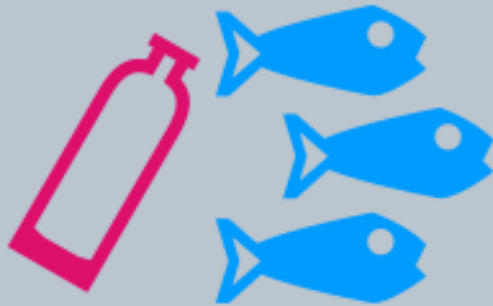


PLASTIC SOUP

Plastic to outweigh fish in the oceans

2025
one ton of plastic
for every three tons of fish

2050
more plastic
than fish

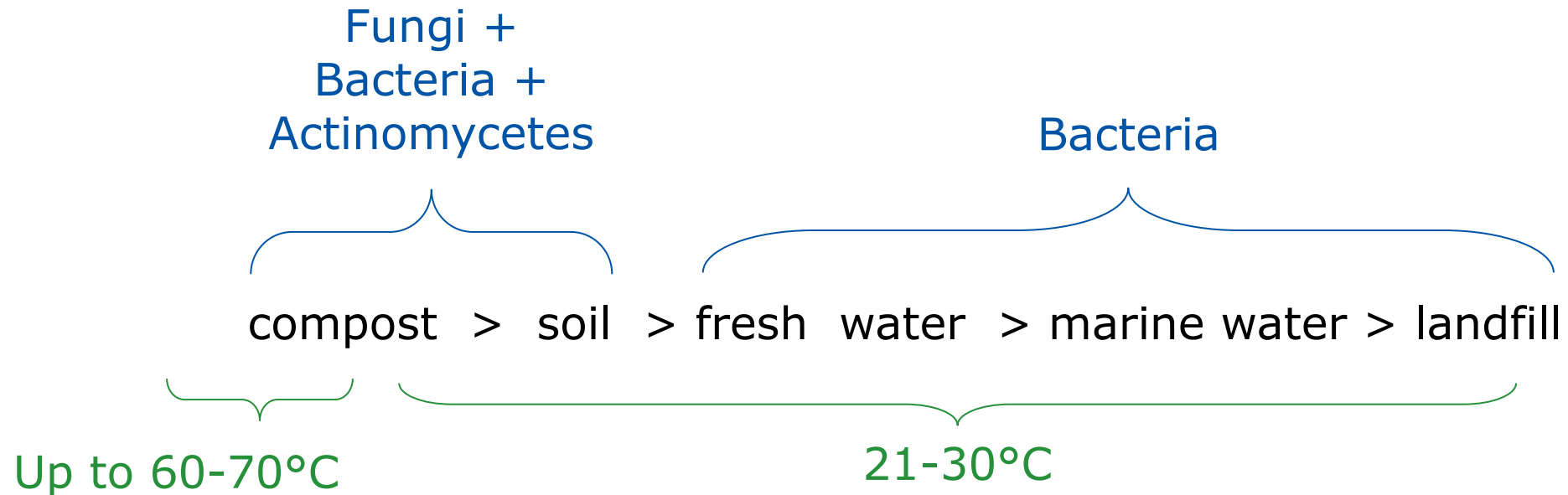


Source: Ellen MacArthur Foundation

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AGRESSIVITEIT VAN MILIEUS

Biodegradation behavior varies from one environment to the other (**no extrapolation possible**)



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RATE OF BIODEGRADATION

Differentiation between

(1) Ready biodegradability :

products with short functional life
biodegradation should be fast
biodegradability is benefit or even necessity (e.g. detergents, food service);
mostly linked to managed end-of-life (EOL)

(2) Medium (to long)term biodegradability :

products with long functional life
biodegradation may not be fast
biodegradability is **non-persistence**
mostly linked to natural, non-managed EOL

LEACHATE INTO ENVIRONMENT

Differentiation between

(1) Intentional :

in situ biodegradation of products for which biodegradation in soil/water has an added value (mulch films, horticultural aids, piscicultural aids, fertilizer coating, etc.)

(2) Unintentional :

Materials which “leak” into the environment and which are ideally non-persistent (textile fibers, car tire wear-off, party balloons, etc.)

LEVEL OF COMMUNICATION

Differentiation between

- (1) B2C
- (2) B2B
- (3) B2A

E.g. cigarette filters : B2B, B2A but no B2C
(to avoid lettering)

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- Functionele levensduur?
- Recupererbaar?
- Recycleerbaar?
- Tuned biodegradatie
- Non-persistentie
- Game changer voor bepaalde toepassingen? (mulch film)

THANK FOR YOUR ATTENTION



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IGS Netherlands



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