

# **Biobed Workshops and biobeds in the world Wageningen 2013**

Jens Husby

# Approved PPP degrades in the top soil



# European biobed workshops



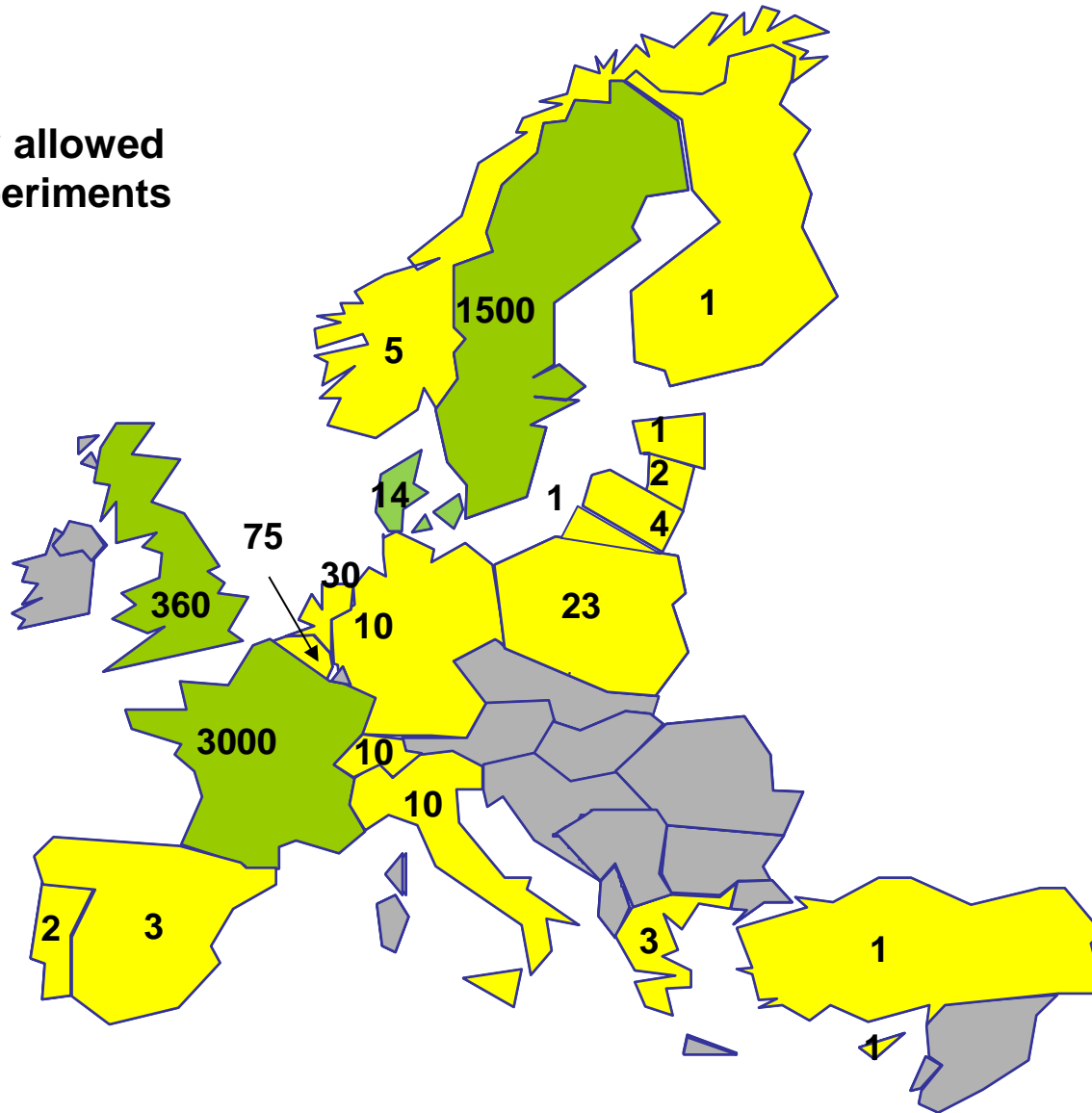
1. 2004 i Malmö
2. 2007 i Gent
3. 2010 i Piacenza
3. 2013 i Wageningen

# LATAM Biobed Workshops 2012



# Biobeds 2013 - EU

- Officially allowed
- Only experiments



# Biobeds 2012 World ÷ EU

- Officially approved
- Only experiments



# Numbers of biobeds in Europe

Biobeds in the world	2012	2011	2010	2008	Information from:
<b>Europe</b>	<b>5003</b>	<b>3839</b>	<b>2841</b>	<b>2255</b>	
Belgium	75	73	69	49	Dirk Baets et.al.
Cyprus			1		Dimitris Karpouzas
Denmark	14	13	11	6	Jens Husby
Estonia			1	1	Eskil Nilsson, Visavi
Finland			1		Jens Husby
France	3000	2000	1000	500	Jean-Yves Darmedru
Greece	3		0		Dimitris Karpouzas
Germany			10	16	Dieter Felgentreu; JKI
Italy			10	6	Ettore Capri
Latonia			2	2	Eskil Nilsson, Visavi
Lithuania			4	5	Eskil Nilsson, Visavi
Nederlands	30	12	6	2	Rik de Werd
Norway		5	5	2	Ole Martin Eklo
Poland	23		20	7	Greg Doruchowski,
Portugal	2		2		Maria do Carmo
Spain	3	3			Emilio Gil
Sweden	1500	1500	1500	1500	Eskil Nilsson, Visavi
Switzerland	10	7	5		Pierre Julien
Turkey			1	1	Ali Musa Bozdogan,
UK	360	226	150	75	Paul Goddard

# Numbers of biobeds in the world ÷ Europe

					Information from:
<b>Africa</b>					
Morocco	27	26	18	9	Salma Bittar, BCS Morocco
Ivory Coast			1	1	Mehdia MOUNIR, BCS Maroc
Senegal			1	1	Mehdia MOUNIR, BCS Maroc
Uganda			-		Maria del Pilar Castillo
Botswana					Maria del Pilar Castillo
<b>South America</b>					
Colombia					Maria del Pilar Castillo
Ecuador		1	1	1	Maria del Pilar Castillo
Peru		1	1	1	Maria del Pilar Castillo
Chile		7			María Cristina Diez Jerez
Argentina					Maria del Pilar Castillo
<b>Central America</b>					
Brazil					Luciano Gebler
Costa Rica					Maria del Pilar Castillo
Guatemala	1500	768	19	19	Julio Ruano / Percy Domínguez
El Salvador					Maria del Pilar Castillo
<b>North America</b>					
USA - Utah				1	Maria del Pilar Castillo
USA - Pennsylvania					Maria del Pilar Castillo
USA - Kentucky	6				George Antonious
Canada- Saskatchewan	4		10		Tom Wolf
Canada- Alberta	1				Tom Wolf
Mexico					Maria del Pilar Castillo
<b>Asia</b>					
Sri Lanka	0	0	0		Jingquan Guo
Vietnam	0	0	0		Jingquan Guo
India	0	0	0		Jingquan Guo
China	0	0	0		Jingquan Guo
Japan	1				Jingquan Guo
New Zealand			1		Maria del Pilar Castillo



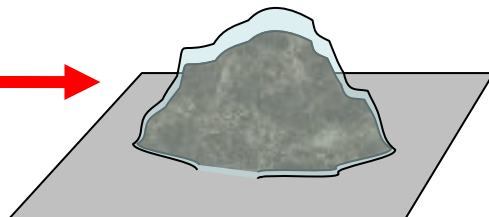
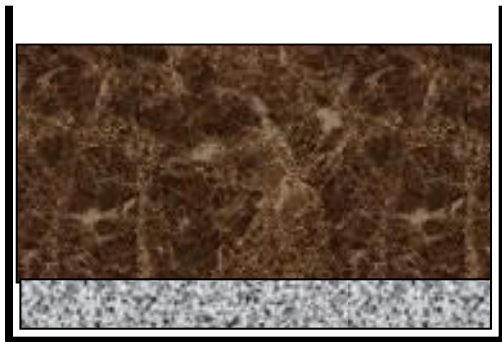
# Important to know

It is important to be allowed to use a safe and cheap way to destroy the old substrate (biomix) in order for farmers to have interest in the system

Substrat

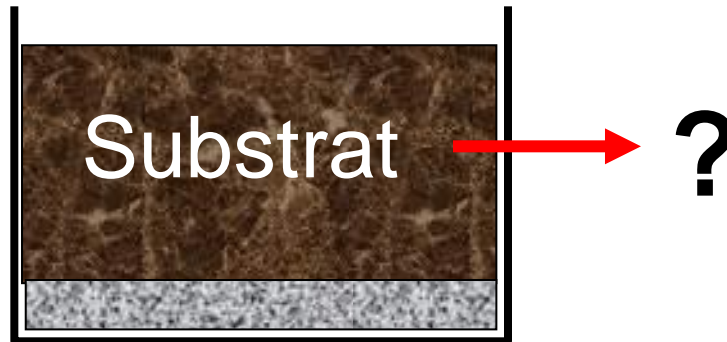
Compost

After 6 to 12 months



# Prices for destroying old substrate

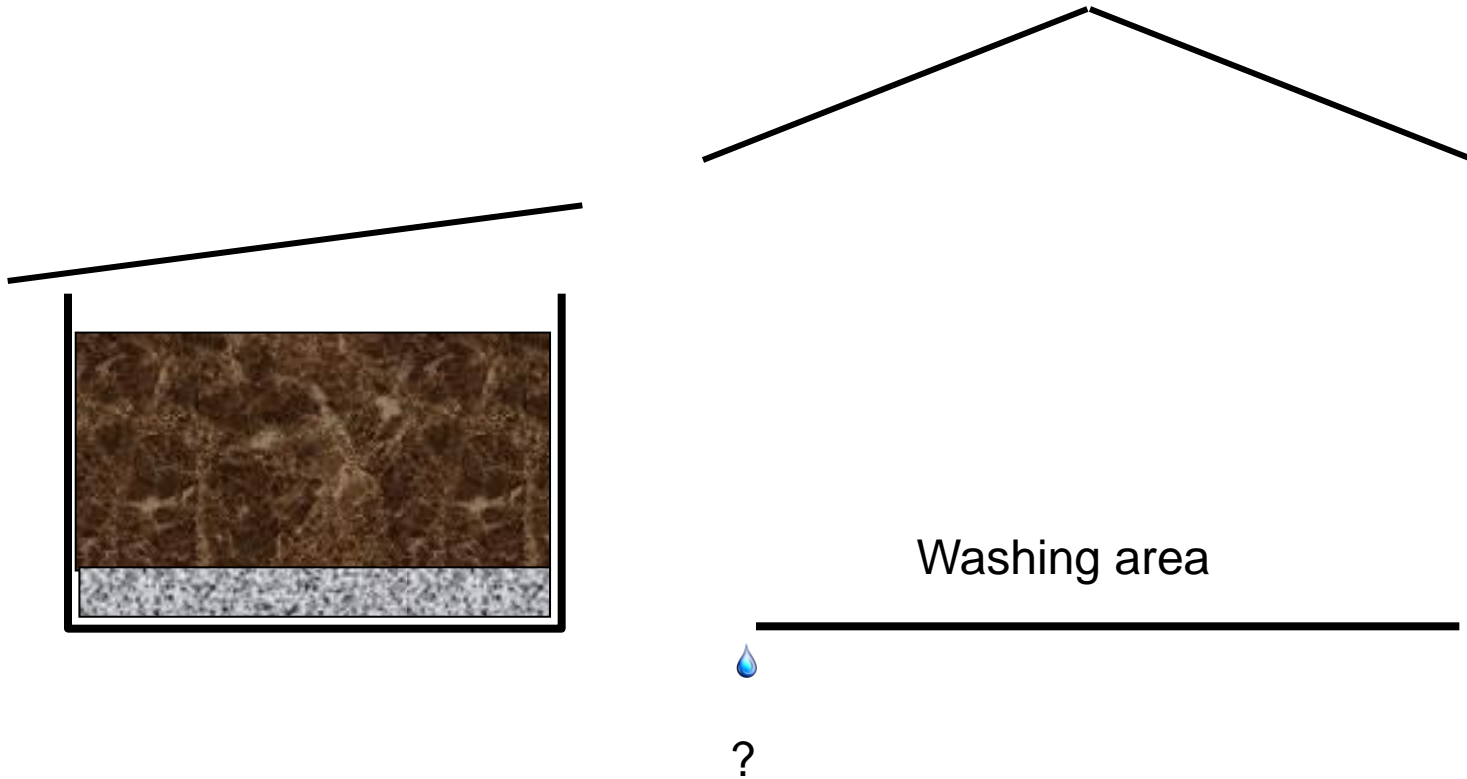
## Danish example



- Burning in waste facility 1 EURO/kg
- Analysing<sup>1)</sup> 800 EURO
- Spreading in the field ?

1) 20 products - price without glyphosat

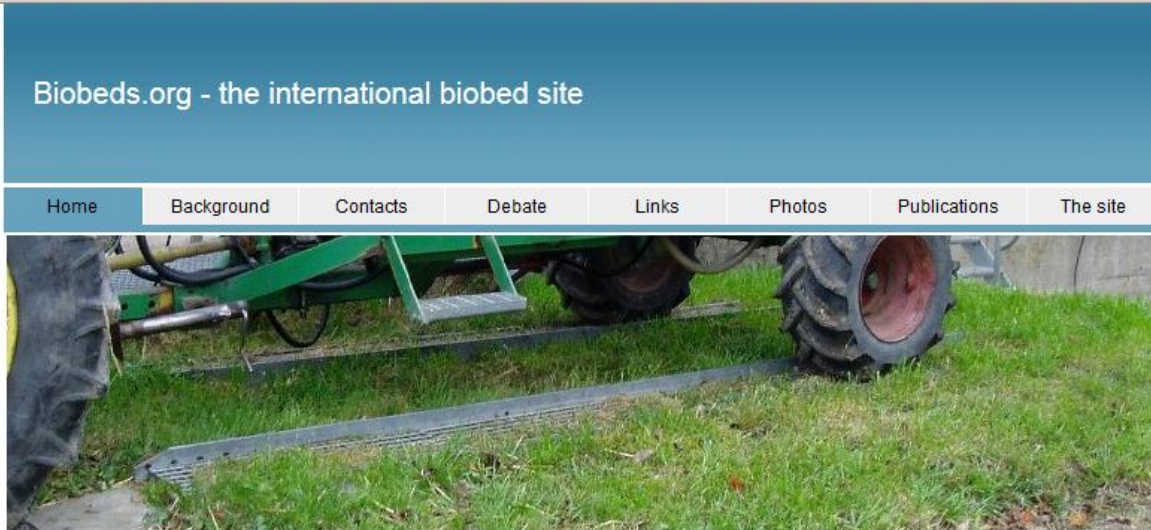
# Waste water and rain water management?



# www.biobeds.org

## Use it!

## Can we do more?



### The biobed site

The purpose of this website is to compile information on biobeds and other biopurification systems and make it accessible to the general public. ["The site"](#)



The photo is from the [workshop](#) held in September 2010. The demonstration was on the farm of Università Cattolica del Sacro Cuore, Piacenza, Italy

### Latest updates

#### 2013

**New article from Kentucky** *February 11*  
A new article is placed on the publication site. [Have a look.](#)

**Biobeds in Denmark** *February 8*  
Biobeds are now mentioned in an updated legislation for filling and washing places in Denmark. It is still not allowed to distribute old used substrate (biomix) in the fields even after composting.

#### 2012

**4th European Biobed Workshop** *November 27*  
The next European workshop is now decided to be held in Wageningen in Nederland in March 2013. The workshop is for researchers working with biobeds and other biopurification systems.

**New activity in Greece** *September 26*



In Greece at the University of Thessaly, Department of Biochemistry and Biotechnology they have now constructed the first three demonstration biobeds under Assistant Prof. Dimitrios G. Karpouzas.

# Organizers of the 4<sup>th</sup> European Biobed Workshop

## **JTI- Swedish Institute of Agricultural and Environmental Engineering**

(program and abstract booklet)

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Leticia Pizzul                      leticia.pizzul(at)jti.se

## **Wagening University** (host)

Rik de Werd                      rik.dewerd(at)wur.nl

## **Bayer Netherlands** (hotel, food and other local issues)

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## **Bayer Nordic** (Initiative and invitations)

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**Wish you a successful and  
enjoyable meeting.**