

Bio sulphuric acid as a potential fungicide and/or herbicide

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Pitch perfect and boost the European Bio-Economy

Cross-border pitching, matchmaking and networking event

Date: Wednesday 7th November 2018

Location: Sheraton Brussels Airport Hotel, Brussels Airport, Belgium

Matchmaking & networking event
enabled by:

Interreg 
North-West Europe
BioBase4SME

Superbio

Index

- I. Colsen - introduction
- II. Biogas treatment – genesis of the idea
- III. Sulphur in Biogas into a valuable product



I. Colsen - introduction

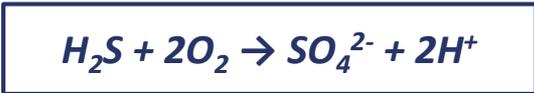
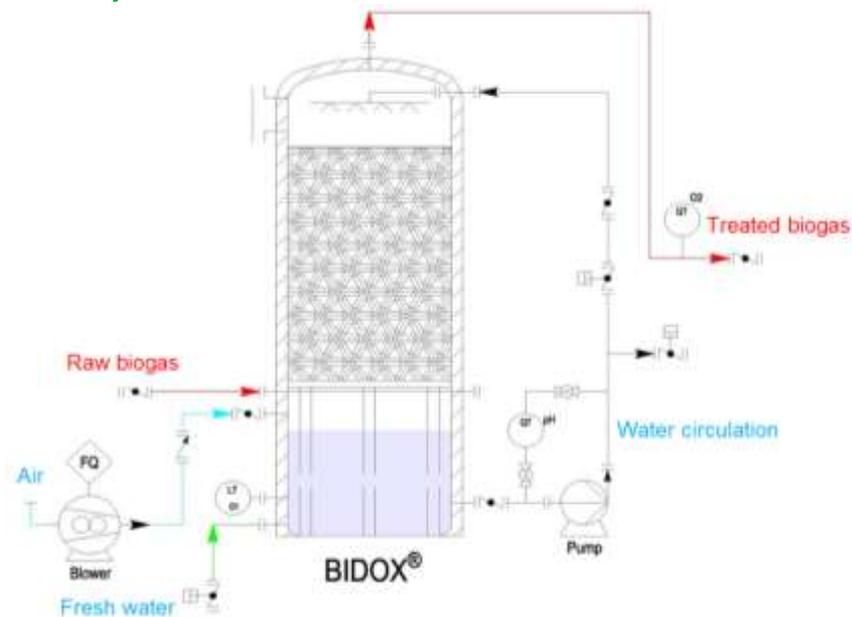
Bullet points:

- ❖ Consultancy agency and construction & engineering Company in the water, energy and environment sectors www.colsen.nl
- ❖ ~30 years of experience
- ❖ Products:
 - Nitrogen recovery and removal from wastewater,
 - Phosphorus recovery,
 - Biogas production (TD, UASB),
 - **Biogas treatment**



II. Biogas treatment – genesis of the idea

BIDOX® -> Biological biogas Desulphurization by Oxidation



Flush water -> diluted bio-sulphuric acid (pH ~ 1.5) with traces of elemental sulphur

III. Sulphur in Biogas into a valuable product

BIDOX® has a huge market:

⇒ Anaerobic wastewater treatment (UASB)

⇒ *Potato's industry*

⇒ *Paper industry*

⇒ *Slaughterhouses*

⇒ *Dairy industry*

⇒ *Fruit & vegetables industry*

⇒ ...

⇒ Thermophilic digestion of industrial organics

⇒ Thermophilic digestion & co-digestion of manure

⇒ Thermophilic sludge digestion

⇒ Landfill gas

The Netherlands	9
Belgium	2
Spain	2
Itali	2
USA	3
UK	1
Cech Republic	1
Totaal	20



III. Sulphur in Biogas into a valuable product

What =>

BIDOX[®] bio-sulphuric acid possible application as herbicide/pesticide/fungicide...

**Potential in NI:
7610 m³ of diluted
bio-H₂SO₄/day =>
2,7 million m³/year**

Why =>

(ordinary) H₂SO₄ was used in the past (and it was working)

- ❖ *Strong pH shift shows fungicides and weed suppression potential*
- ❖ *Systemic products for fungicides and weed control (glyphosate based) need an alternative*

Where are we =>

*Beginning of the research process,
new partners are more than welcome...*