



SHORT SPEECH OF FER WEERHEIJM  
AT WAGENINGEN UNIVERSITY 3<sup>RD</sup> OF APRIL 2014

**INTENSIVE HORTICULTURE**  
CAN BE THE BEGINNING OF AN ANSWER  
TO AVOID ABUSE OF WATER AND FERTILIZERS.





## SHORT SPEECH OF FER WEERHEIJM AT WAGENINGEN UNIVERSITY 3<sup>RD</sup> OF APRIL 2014

### **WE KNOW THAT 75% OF THE FRESH WATER, USED WORLDWIDE, IS USED IN THE AGRICULTURE AND THE HORTICULTURE.**

Due to the current systems, less than 10% of this fresh water finally reaches the place to be: the roots.

Knowing that fresh water is becoming more-and-more an important item (we use more than we should) and knowing that the population will continue growing (so more fresh water is demanded in the future) we think the following:

Intensive horticulture can be the beginning of an answer to avoid abuse of water and fertilizers.

***When we speak about intensive horticulture, we mean: vegetables, grown in substrates with drip irrigation so that we find the following advantages:***

- 1) Less diseases from the soil.
- 2) No fertile soil is needed anymore (less limitations for the locations).
- 3) Less water abuse.
- 4) Less fertilizer abuse.
- 5) Higher yields per m<sup>2</sup>.



**SHORT SPEECH OF FER WEERHEIJM**  
AT WAGENINGEN UNIVERSITY 3<sup>RD</sup> OF APRIL 2014

**WE ARE SURE THAT WE MAKE A GOOD STEP IN THE RIGHT DIRECTION WITH THIS.**

Nevertheless the discussion today is about durability and especially about substrates.

**SO LET'S ANSWER THE QUESTION: WHAT IS A DURABLE PROCESS?**

- A durable process can be maintained constantly (permanently) without exhausting the earth.

**LET'S FACE IT: NOT POSSIBLE!**



## SHORT SPEECH OF FER WEERHEIJM AT WAGENINGEN UNIVERSITY 3<sup>RD</sup> OF APRIL 2014

### *We are looking for a substrate:*

- Of which the raw materials are easily available
- Without damaging or changing the environment
- Without disturbing the natural balance
- Without using energy (which does not come from sun or wind)
- Without transport
- Which has the ideal physical characteristics for growing plants on
- Which has the ideal chemical characteristics for growing plants on
- Which is easy to “steer” with fertilizers
- Which can be recycled or used for other purposes without any negative effects on nature

### **AGAIN: NOT POSSIBLE!!**

So, does this mean that we just do what we like without taking responsibility ?



## SHORT SPEECH OF FER WEERHEIJM AT WAGENINGEN UNIVERSITY 3<sup>RD</sup> OF APRIL 2014

I don't think so.

### **I THINK WE HAVE TO DO THE BEST POSSIBLE**

Knowing that intensive horticulture is really a huge improvement for the world, we see that we need a substrate.

And never it will be 100% durable;

Imagine you have a beautiful substrate: uniform, clean, ideal to grow on than you find out that it costs a lot of energy to produce and the waste material is not organic and it costs again energy to recycle

Imagine you have a substrate, made of waste material, possible to grow in..than you find out that it is difficult to find homogeneous/uniform raw materials and on top of that it is very heavy (so transport will be an item)

Imagine you have a substrate which is organic and clean..than you find out that it breaks down quite fast so you will need more of this and people complain that the countryside is changing.



## SHORT SPEECH OF FER WEERHEIJM AT WAGENINGEN UNIVERSITY 3<sup>RD</sup> OF APRIL 2014

Imagine you found a local product and you don't have to transport farther than it turns out to be so much draining that the grower is obliged to invest in a very expensive system to recirculate..

Imagine you have an unused organic material, great physical characteristics and easy to grow in than you find out that it is sometimes salt and it has to be transported from far..

*I mean: every advantage knows its disadvantage.*

*Up to us to realize more advantages than disadvantages.*



## SHORT SPEECH OF FER WEERHEIJM AT WAGENINGEN UNIVERSITY 3<sup>RD</sup> OF APRIL 2014

### **WE LEARNED FROM OTHER SPEAKERS THAT INTENSIVE HORTICULTURE IS MUCH MORE DURABLE:**

*small rooting-zone, precise water- and fertilizer dosing, higher yield per m2 and the quality of the soil is not any more important.*

If we look around us, worldwide, we see that already many vegetables are grown in substrates.

In practice we see that in our area (Holland, northern Europe and also Canada) already maybe 80% of the growers recirculate the drainwater.

Nevertheless, if we check other countries (like Mexico, Turkey, Korea, Africa etc etc) we see that more than 80% of the water is not recirculated.

So there is the advantage of less use of water and less use of fertilizer and higher yield per m2 although not as “perfect” as other growers can do.



**SHORT SPEECH OF FER WEERHEIJM**  
AT WAGENINGEN UNIVERSITY 3<sup>RD</sup> OF APRIL 2014

**I FEEL WE HAVE TO BE PRAGMATIC: WHAT SHOULD I USE AT THIS MOMENT, IN THIS SITUATION, WITH THIS KNOWLEDGE AND THESE POSSIBILITIES ?**

**...AND...**

***...taking my responsibility for now and for the future.***