

Organic Greenhouse Horticulture Internationally

Acreage, Crops and Research

Rob J.M.Meijer and Carin van der Lans, Wageningen UR Glastuinbouw

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Greenhouse horticulture

- Growing horticultural crops in a permanent structure
- Vegetables and Herbs
- Flowers and Pot plants
- Fruits



Data collection

- Request to the participants
- Presentations of Cologne meeting 2009

Acreage

Country	Total GH	Total OGH	Bio of total GH
	ha	ha	%
Austria			14
Belgium		21	2
Canada	2299	31	2
Denmark	900	25	6
Egypt	10000	30	.3
Estonia	100	0.7	.7
Finland	199	9	7
Germany	1000		5



Acreage

Country	Total GH	Total OGH	Bio of total GH
	ha	ha	%
Hungary		0.1	
Israel	8850	500	
Italy	735,000	1024	8
Netherlands	10000	95	3
Saudi Arabia			
Slovenia			6
Spain		1700	5
Switzerland	1150	80	11
United Kingdom		75	



Acreage summerized

- Organic Greenhouse Horticulture relatively small
- Variation 2 - 14 %
- Related to the market

Crops

Country	Main crops
Austria	
Belgium	tomato, cucumber, sweet pepper, salads
Canada	tomato, cucumber, lettuce, sweet pepper
Czech Republic	
Denmark	tomato, cucumber, sweet pepper
Egypt	sweet pepper, cucumber
Estonia	tomato, cucumber, sweet pepper, salads, herbs, melon, table grapes
Finland	
Germany	
Ghana	tomato, sweet pepper, carrot, cucumber, cabbage



Crops

Country	Main crops
Hungary	salads
Israel	sweet pepper, tomato, cucumber
Italy	tomato, zucchini, sweet pepper, aubergine, melon
Netherlands	tomato, sweet pepper, cucumber, salads
Saoudia Arabia	tomato, cucumber, sweet pepper
Slovenia	
Spain	
Switzerland	
United Kingdom	



Crops mentioned as important

- Cucumber 10
- Tomato 9
- Sweet pepper 9
- Salads 5
- Melon 2

- Others mentioned once

- Aubergine
- Cabbage
- Carrot
- Zucchini
- Herbs
- Table grapes

Topics in research

Country	Topics in order of importance
Austria	Varieties, novel crops, crop protection, fertilization and green manure
Belgium	Varieties, crop protection, compost and soil management
Canada	Closed grow system, artificial lighting, energy saving, soil improvement, biocontrol, pot plants and berries
Czech Republic	
Denmark	Soil management, irrigation management, seasonal fertilization, energy saving and supply
Egypt	Tolerant cultivars, plant nutrition, biological control, greenhouse and covers
Estonia	Suitable varieties, fertilization, pest and disease control, hydroponics
Finland	
Germany	
Ghana	Healthy soil and substrate, crop climate, disease control, healthy plant material



Topics in research

Country	Topics in order of importance
Hungary	environmental impact, energy use, novel crops, extended season
Israel	crop protection, organic nitrogen supply, weed control, postharvest
Italy	breeding, planting material, weed management, soil fertility, pest/disease control
Netherlands	energy saving and CO2 supply, nutrient and water management, zero emission, soil suppressiveness, biological control, disease control
Saudi Arabia	plant nutrition, biological control, marketing
Slovenia	varieties, novel crops, fertilization, quality
Spain	soil quality, compost, biostimulants, nutrition, biopesticides
Switzerland	
United Kingdom	fertilization management, biocontrol



Research topics mentioned

■ Varieties	5	■ Plant nutrition	10
■ Novel crops	4	■ Compost/ Soil mngment	8
■ Breeding	1	■ Watermangement	3
■ Planting material	2	■ Hydroponics	1
■ Crop climate	1	■ Closed system	1
■ Extended season	1	■ Crop protection	13
■ Art lighting	1	■ Weed management	2
■ Energy and CO ₂	4	■ Post harvest	2
■ Greenh constr/cover	1	■ Marketing	1
		■ Environmnt impact	1



Overall conclusion

Way to go

- To increase
 - Sustainability
 - Stability
 - Profitability
- To increase Market Share

So

- A lot to do this week



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Thank you for your attention

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