



**Yes, we can ... change health,  
welfare and business with  
houseplants**

Jo Read  
Plants for People

Yes We Can



More than worth their weight ...



- 
- Improve physical health
  - Give businesses a competitive edge
  - Improve performance, creativity, concentration
  - Energy saving

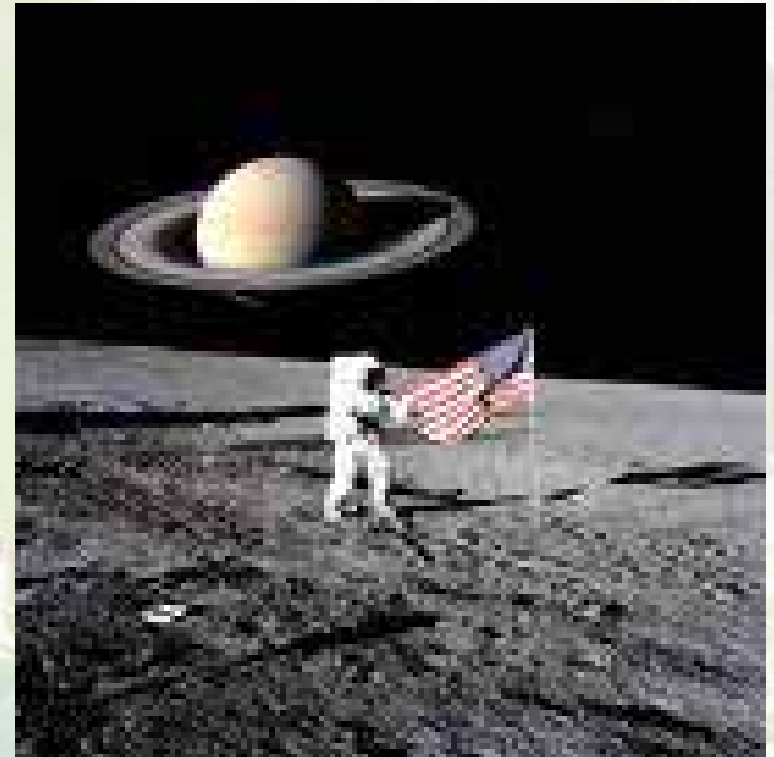
# Why plants matter...



- Sustain our eco system
- Lungs of the earth
- Our contact with pre-history
- Genes playing catch-up?



Understanding started with ...



# The silent power of houseplants

- Health & welfare benefits
- Quality of life benefits
- Financial benefits
- 'Green' world benefits
- Ultimate multi-taskers



# The silent power of houseplants

for everyone

- **Breathing: air cleaning** Wolverton, Wood & Fjeld
  - Chomp up poisons for food: emit oxygen
- **Health: improving** Fjeld
  - 45% reduction in headaches: less complaints of minor ailments
- **Stress: reducing** Lohr, Russell, Ulrich, Fjeld, Smith
  - Lower pulse rates
  - Faster surgical recovery time & pain management
  - Not just calmer but less time off work too
- **Dust: air quality** Lohr
  - Reduce airborne dust particles by as much as 20%
- **Humidity: comfort** Henseler, Kotter
  - Can increase levels by as much as 20%

# The silent power of houseplants

*for business*

- Improve productivity
  - By as much as 12%
- Concentration
  - Especially if you sit in front of a computer for more than 4 hours a day
- Creativity
  - Contribute to increased creativity
- Noise
  - Absorb and deflect sound
- Energy controllers
  - Heat and cold regulators

Lohr

Berg, Lohr

Ulrich, Hesselink

Costa

Costa, Schempp

# Houseplants for a sustainable future

- Can houseplants become standard technology to improve indoor air quality?
- The Australian Green Building Council has introduced the Green Star as a standard classification for the inclusion of houseplants in eco builds
- CO2 reduction achieved by houseplants can be used in footprint calculations



# CO2 cleansers

- 10% reduction in air-conditioned offices
- 25% reduction in naturally ventilated offices
- According to Ambius calculations suggest 300g (10 oz) of CO can be removed from the atmosphere for every sq m of leaf surface per year in typical interior conditions
- ... this equates to 170 litres or 6 cubic feet of CO2 gas
- Can be even more in lighter conditions e.g. atriums

# Research confirmation

New material from

- Andrew Smith, John Moores University, Liverpool
- Dr Tina Maria Cade, Texas University
- Guerrilla research, Flower Council of Holland
- John Klein Hesselink, TNO, Netherlands
- Kwang Jin Kim, Mi Jung Kil, Jeong Seob Song & Eun Ha Yoo, Konbruk University, Seoul
- Tina Bringslimark, Agricultural University of Norway
- Seong-Hyun Park & Richard H Mattson, Kansas State University
- Seija Shibata, & Naoto Suzuki, Bunkyo Gakuin University, Japan

# Andrew Smith, John Moores Liverpool

- 2008: in situ in Edinburgh
- Control versus Test office
- Identical offices; jobs personnel numbers
- Specific houseplant:employee ratio
- 6 month trial
- More houseplants added half way through
- Use of digital survey
- Sponsored by GP Plantscape



Source: Andrew Smith  
Sponsored by G P Plantscape

# Andrew Smith - results

- Acknowledged low humidity levels improved
- As more houseplants added so better air quality recorded
- CO2 levels halved due to houseplants
- CO significantly reduced due to houseplants
- VOC levels reduced due to houseplants
- Air quality 50% sickness reduction in Test office (YoY)
- But a 20% increase in the Control (non-planted office) (YoY)

Source: Andrew Smith  
Sponsored by G P Plantscape



# Dr Tina Marie Cade, Texas University

- Internet Survey (2008)
- Greener Offices make Happier Employees
- Planted offices
  - Improve job satisfaction
  - More positive attitudes towards work & their bosses



Source: HortScience



# Flower Council of Holland

- Guerrilla action
- 3 offices, 3 months
- Self monitoring questionnaires
- Houseplants considered to have positive effect on employees & environment in long-term



# TNO research in Holland



- Reduction in complaints of flu like symptoms
- Noted physical improvement for those who were fatigued and in stressed condition
- Positive effect on productivity in creative work (but not in production)
- Employees more productive when they look up and see green houseplants
- Houseplants need to be physically present for this effect

# Konkuk University, Seoul

- Korea: 2 houseplants which remove formaldehyde identified



Source: Journal of the American Society for Horticultural Science

# Tina Bringslimark, Norway

- Reduction in number of sick days taken due to stress
- Highlighted relationship between number of houseplants seen and the impact on reduced sick leave days



Source: Agricultural University of Norway, Oslo

# Park & Mattson, Kansas State University

- Post stomach operations
- Plants & flowers reduce surgery related stress
- Less pain & less pain medication
- More positive physiological response  
(lower BP & heart rate)
- Better than TV !!



Source: ScienceDaily December 2008

# Shibata and Suzuki, Japan

- Houseplant impact on association task
- Plain room v plant/magazine room
- Poor mood in plain room
- Magazine or houseplant present = mood improvement
- Where no houseplant participants felt less energised, less self confident
- Females worked better with plant in room



# Discontent at work

- Houseplants can help retain workforce



# Turn it around

- Happier environments can produce 30% improvement in bottom line





# Topical & important Message

- Carbon footprint effect
- Energy efficiency
- Productivity and creativity improvements
- Meeting life quality expectations of millennials
  - 14-21% of workforce
  - Less noise tolerant
  - Technology dependent
- Cannot afford to overlook houseplants any longer



# The Office of the Future?



.. or the Office of the Future?

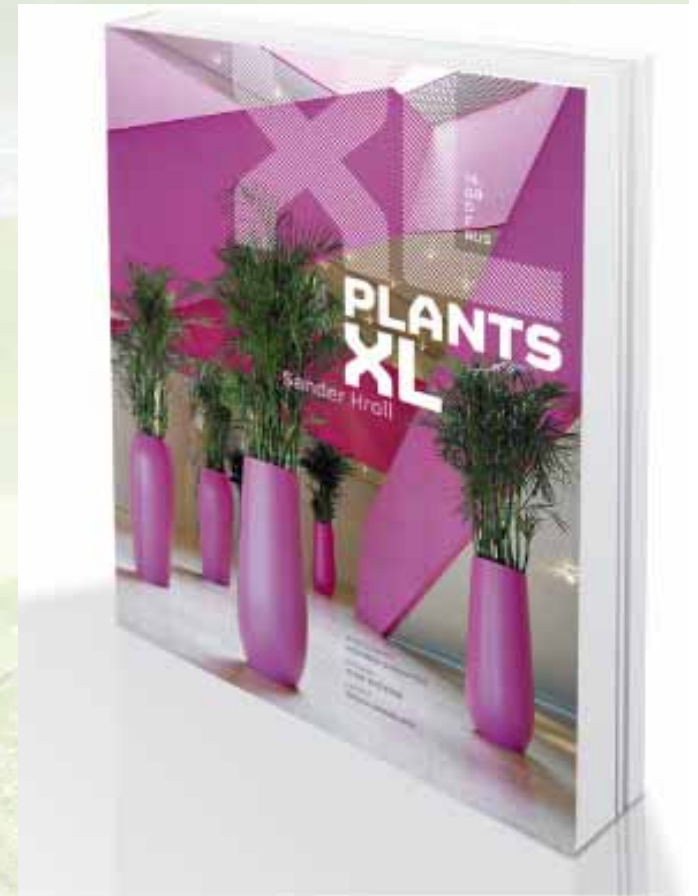


# We should be evangelists

- Responsible & planetary saving
- Efficient for energy & productivity
- Healthier for people and results
- Good for people = good for business
- ... but it needs good houseplants

# Plants XL

- Hot off the press
- Creative use of houseplants
- Stunning images
- Only £44.50
- And we leave the last word



He Did It, We Can

