



CedressTM

a new biological seed treatment product
against pea diseases

Margareta Hökeberg

Mariann Wikström*, Ann-Sofie Birch-Jensen, Christian Thaning**, Per Widén**,
Jamshid Fatehi, Jolanta Levenfors, Christopher J Welch

**MASE Laboratory
Sweden**

* Former Findus AB

** Lantmannen-BioAgri



Ascochyta pea blight



Causal agents: *Ascochyta pisi*, *Mycosphaerella pinodes*,
Phoma medicaginis var. *pinodella*

Symptoms on pea roots, stems, leaves, pods and seeds

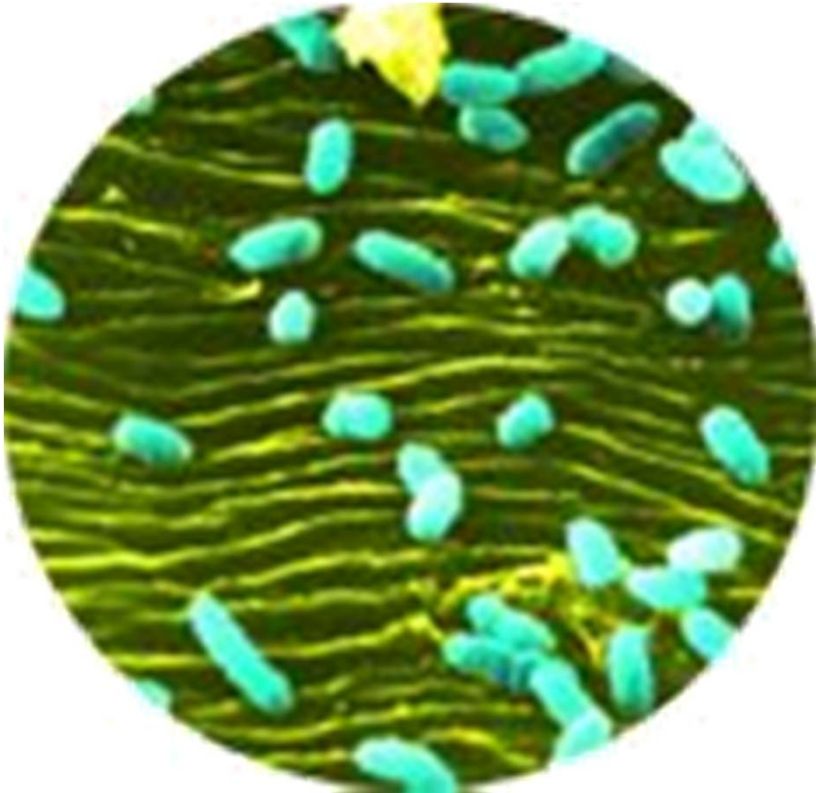
Up to 50 % yield loss

Ascochyta symptoms on pea stem base





P. chlororaphis MA342 – a natural soil bacterium

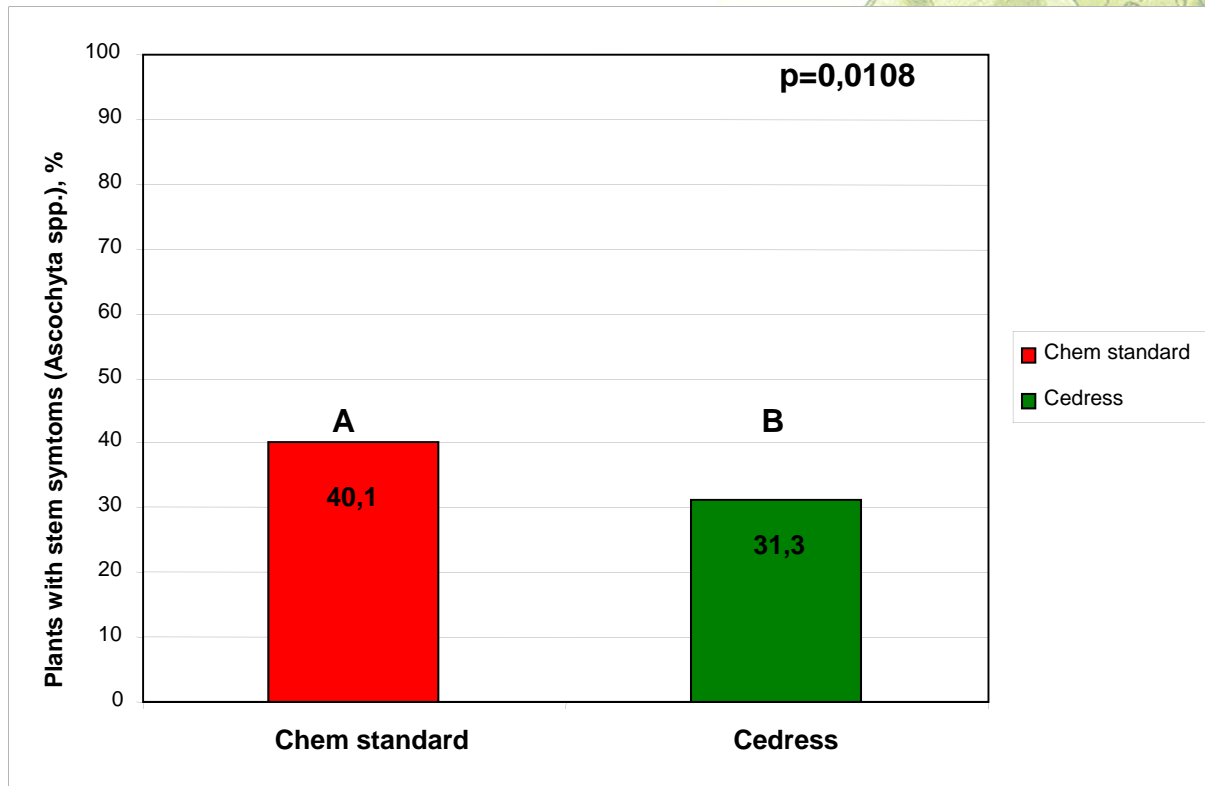


- The active bacterial isolate in the biological seed treatment products Cedomon[®], Cerall[®] and Cedress[™], marketed by Lantmannen-BioAgri.
- Isolated and selected by researchers at SLU in 1988, patented.
- EU Annex I approved in 2004 (Lantmannen-BioAgri).
- Potential in many crops. Complex MoA, durable.

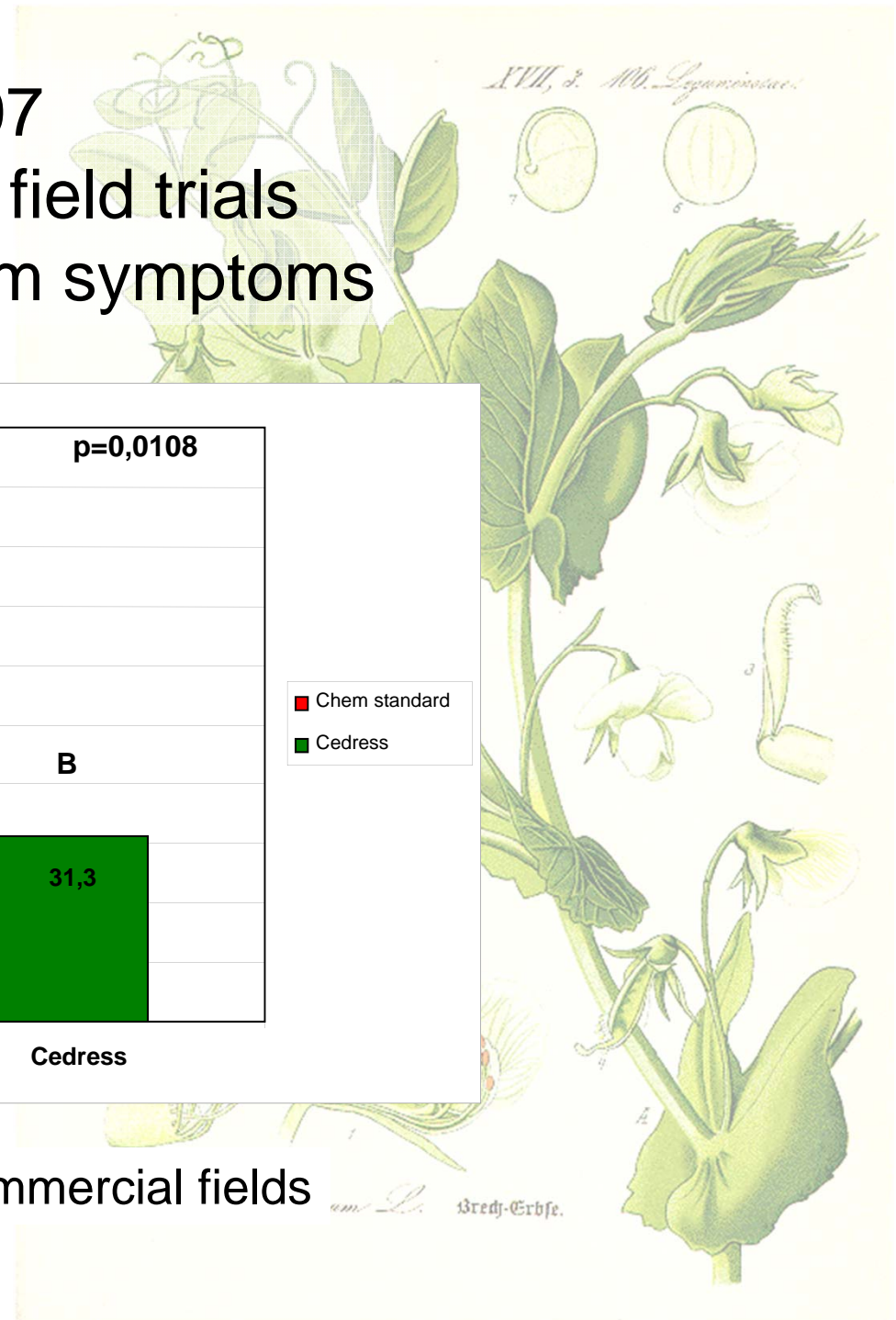
2007

Large scale field trials

Ascochyta stem symptoms



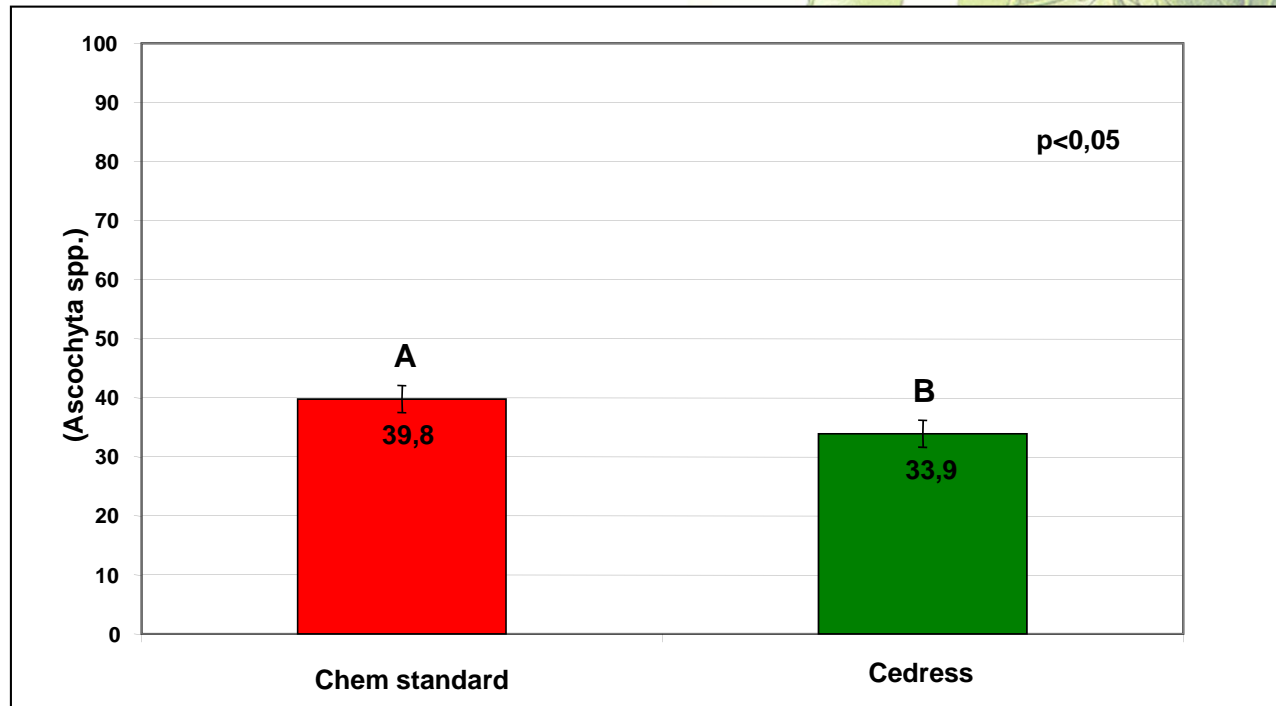
Mean figures from 9 commercial fields



2008

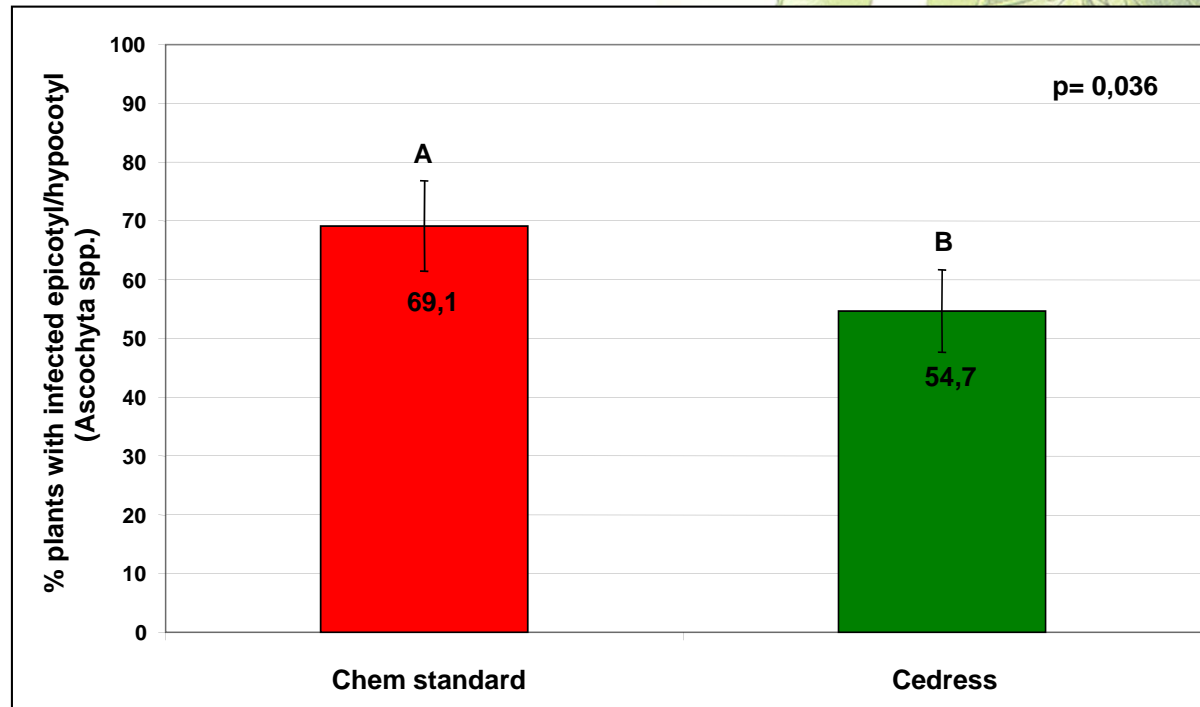
Large scale field trials

Ascochyta stem symptoms



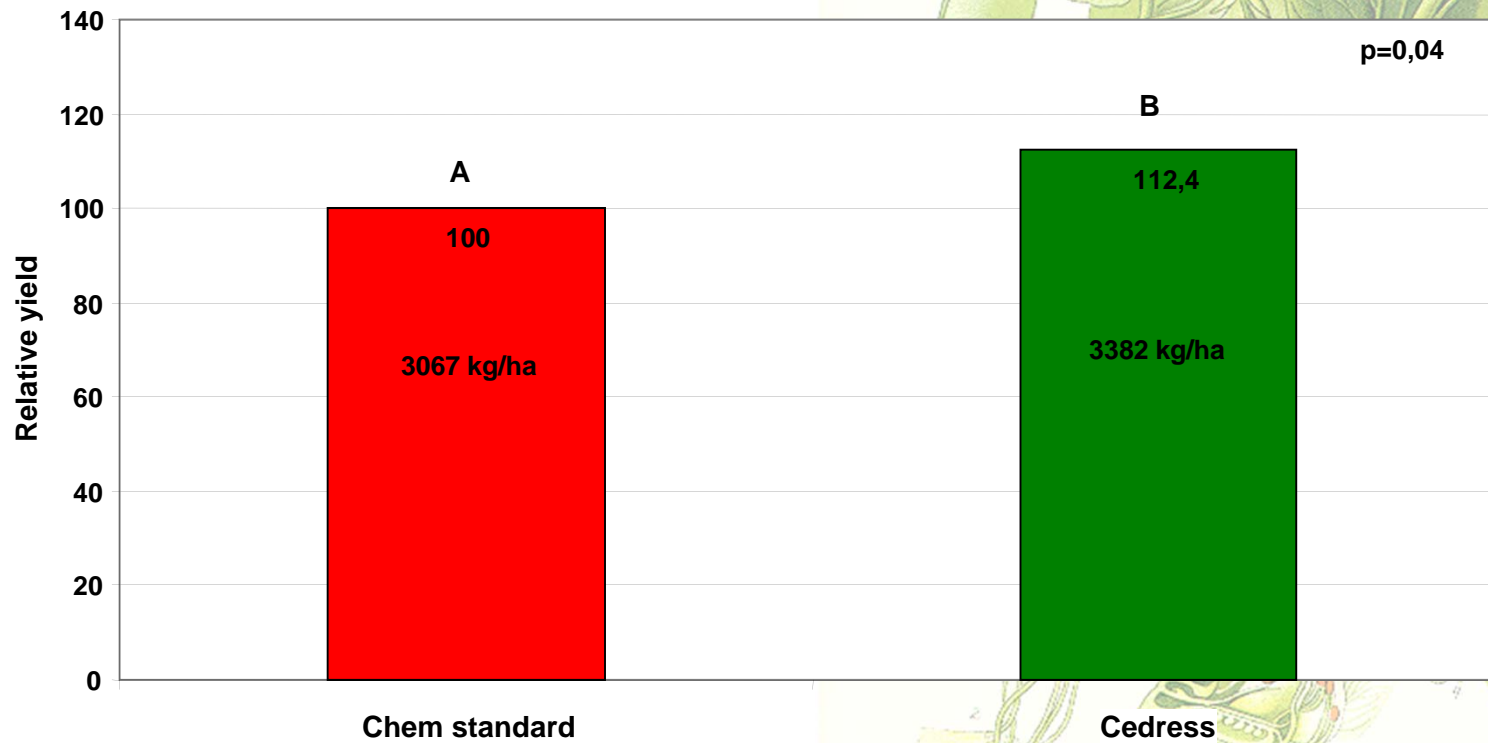
Mean figures from 12 commercial fields

2009 Large scale field trials Ascochyta stem symptoms

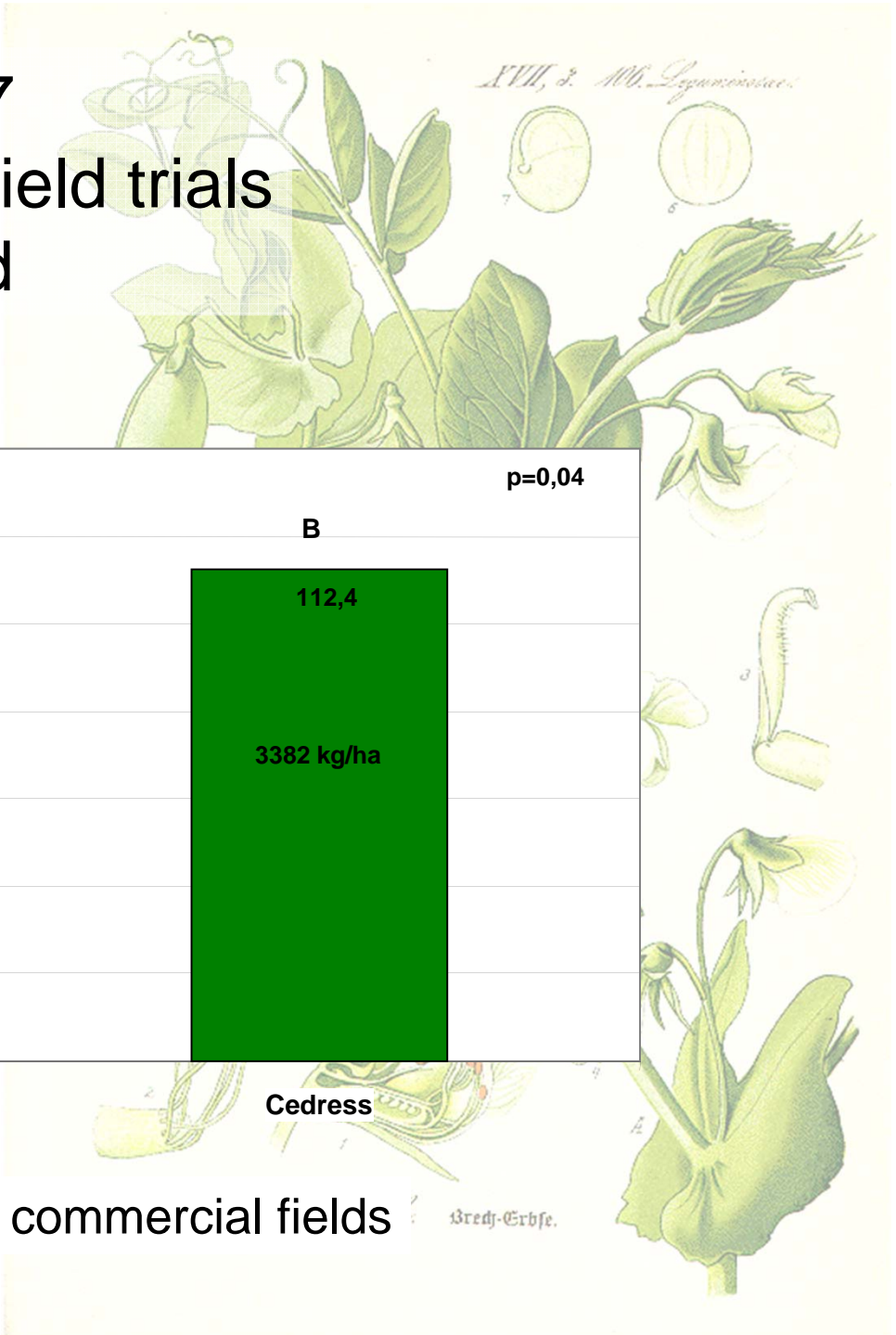


Mean figures from 2 commercial fields

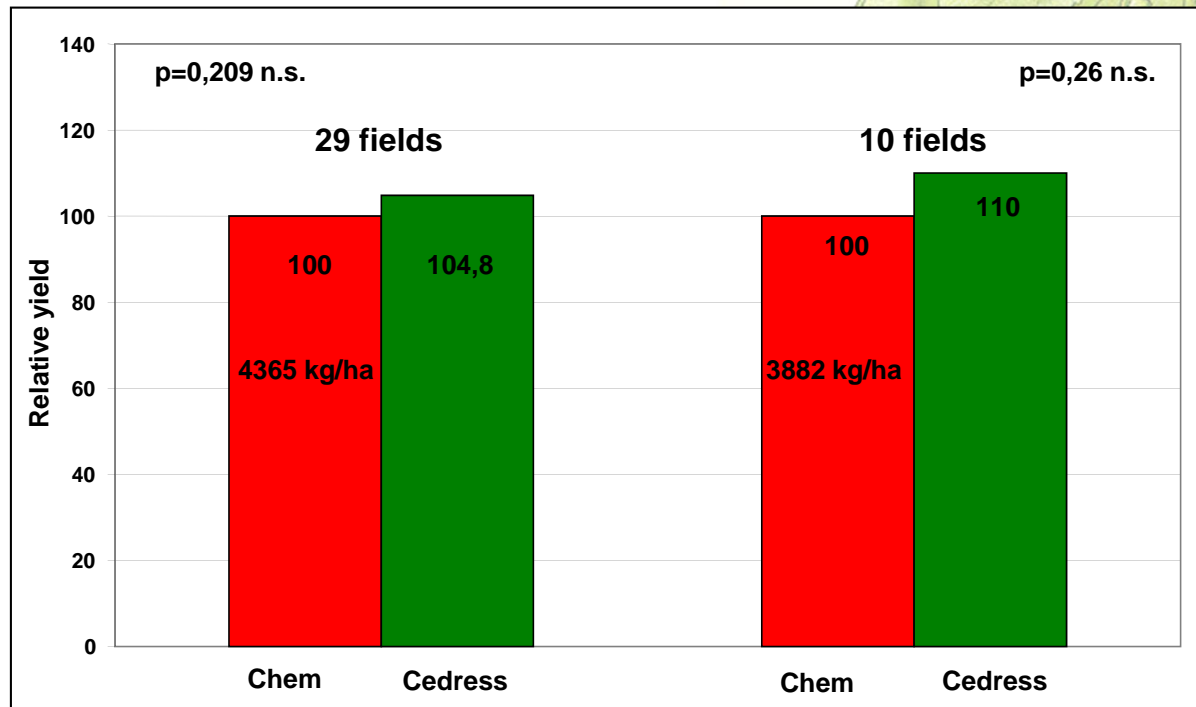
2007 Large scale field trials Yield



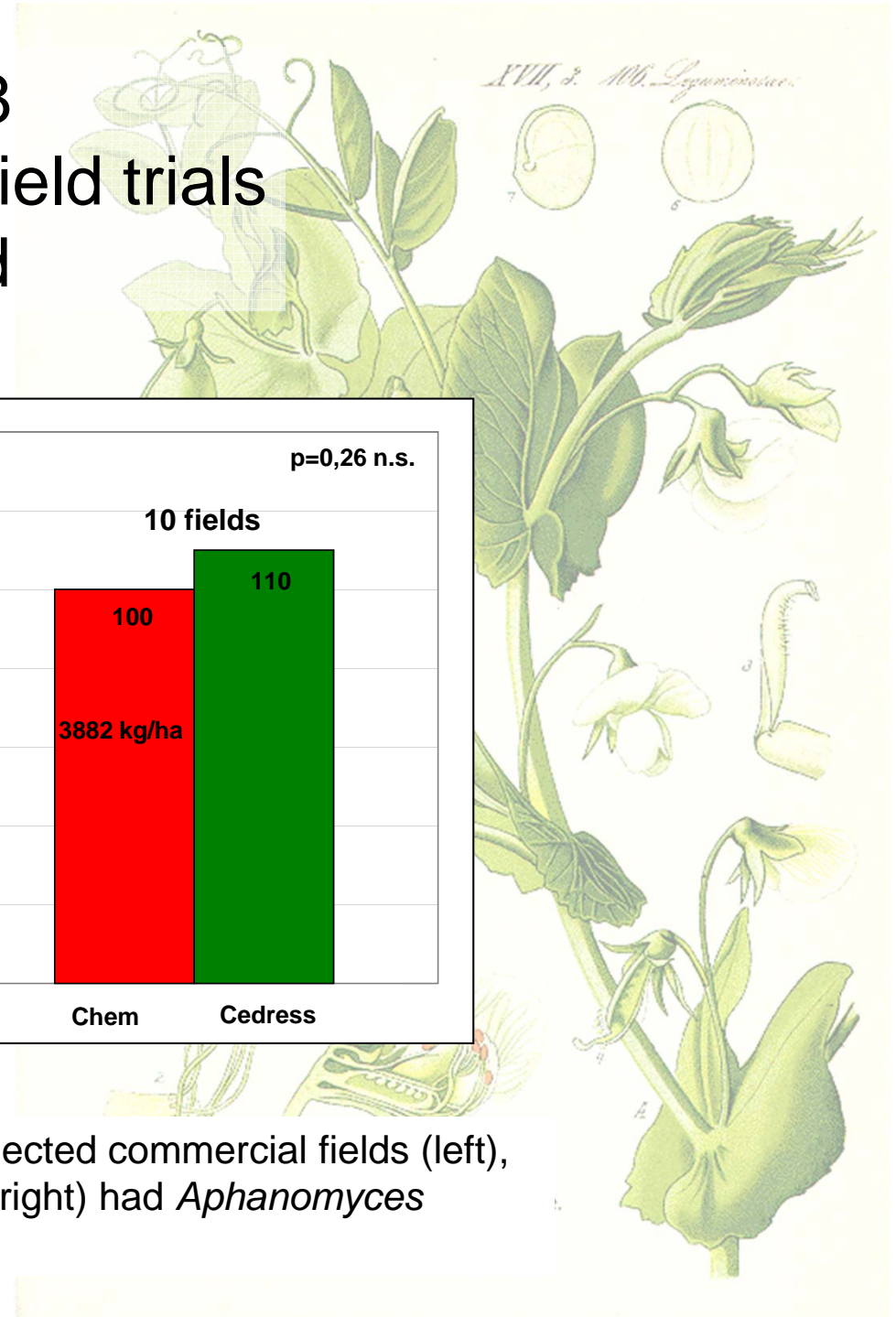
Mean figures from 9 commercial fields



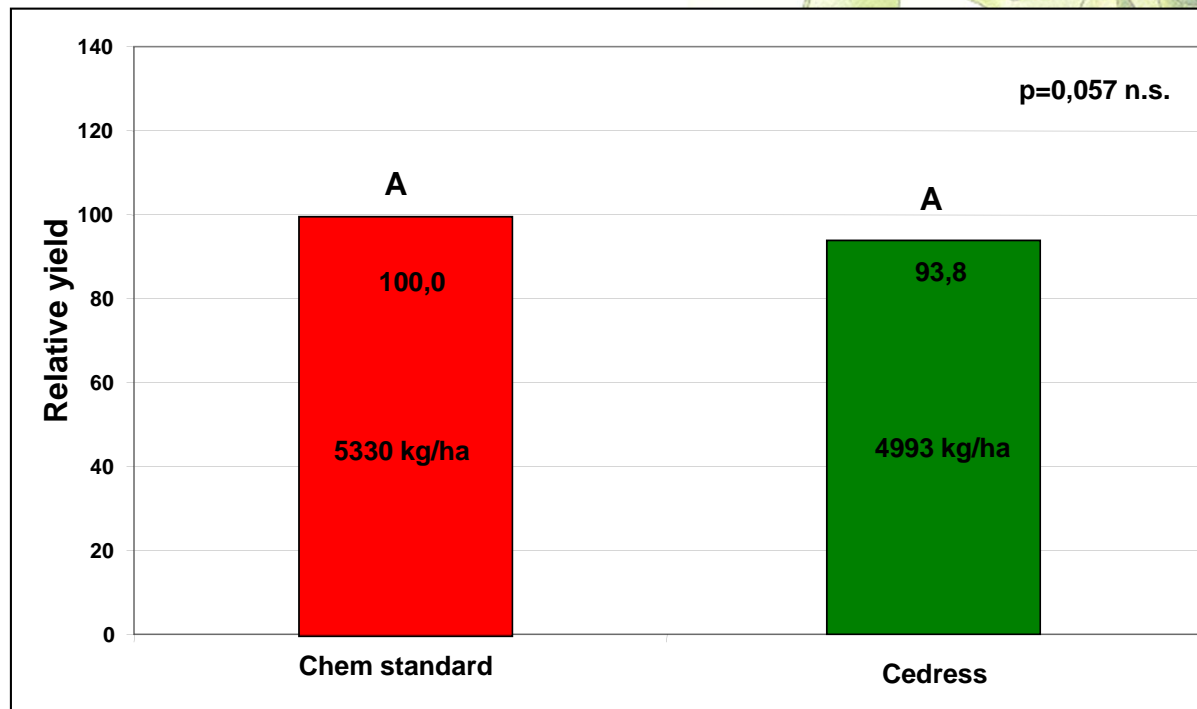
2008 Large scale field trials Yield



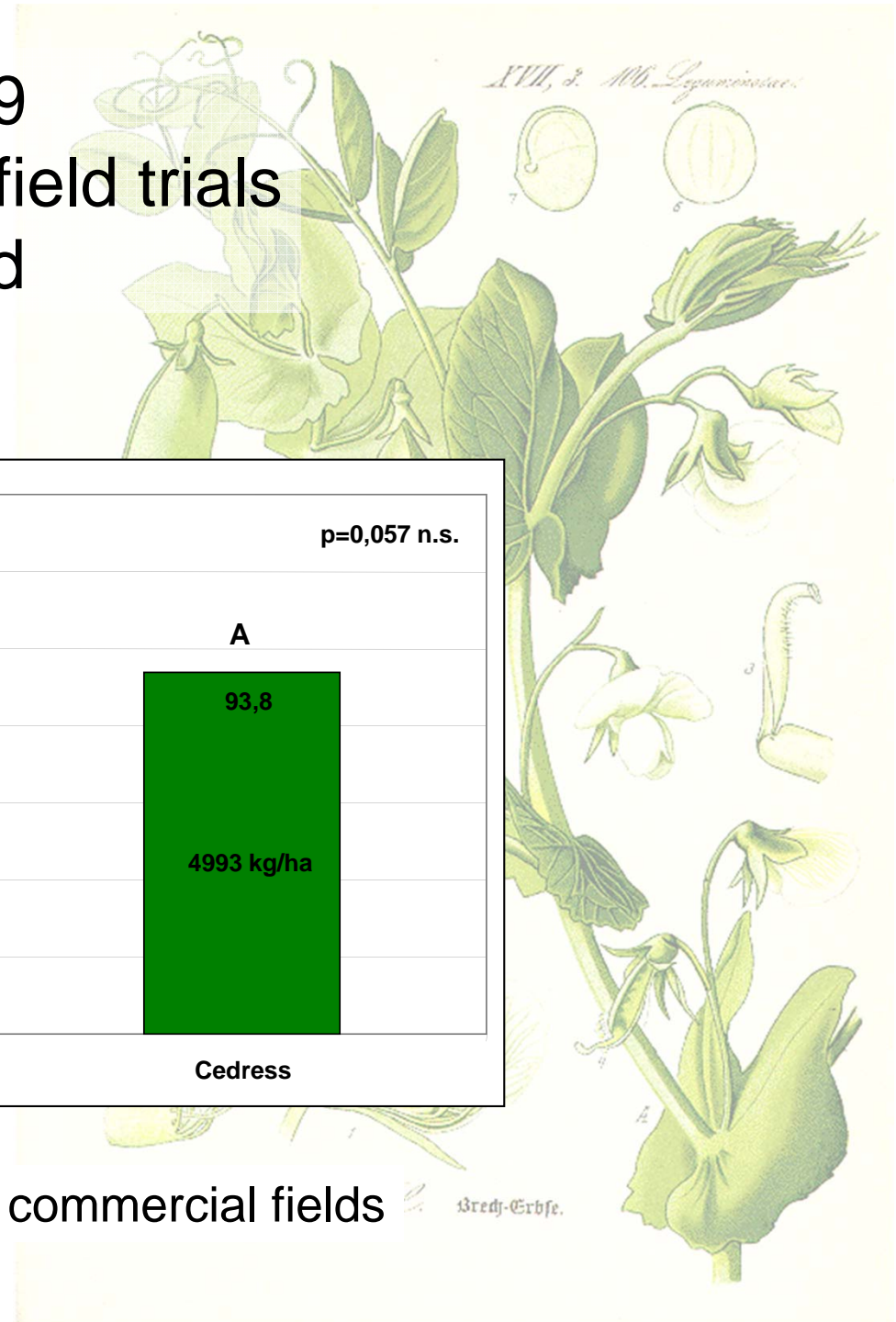
Mean figures from 29 randomly selected commercial fields (left), out of which 10 commercial fields (right) had *Aphanomyces euteiches* root rot infections.



2009 Large scale field trials Yield



Mean figures from 2 commercial fields



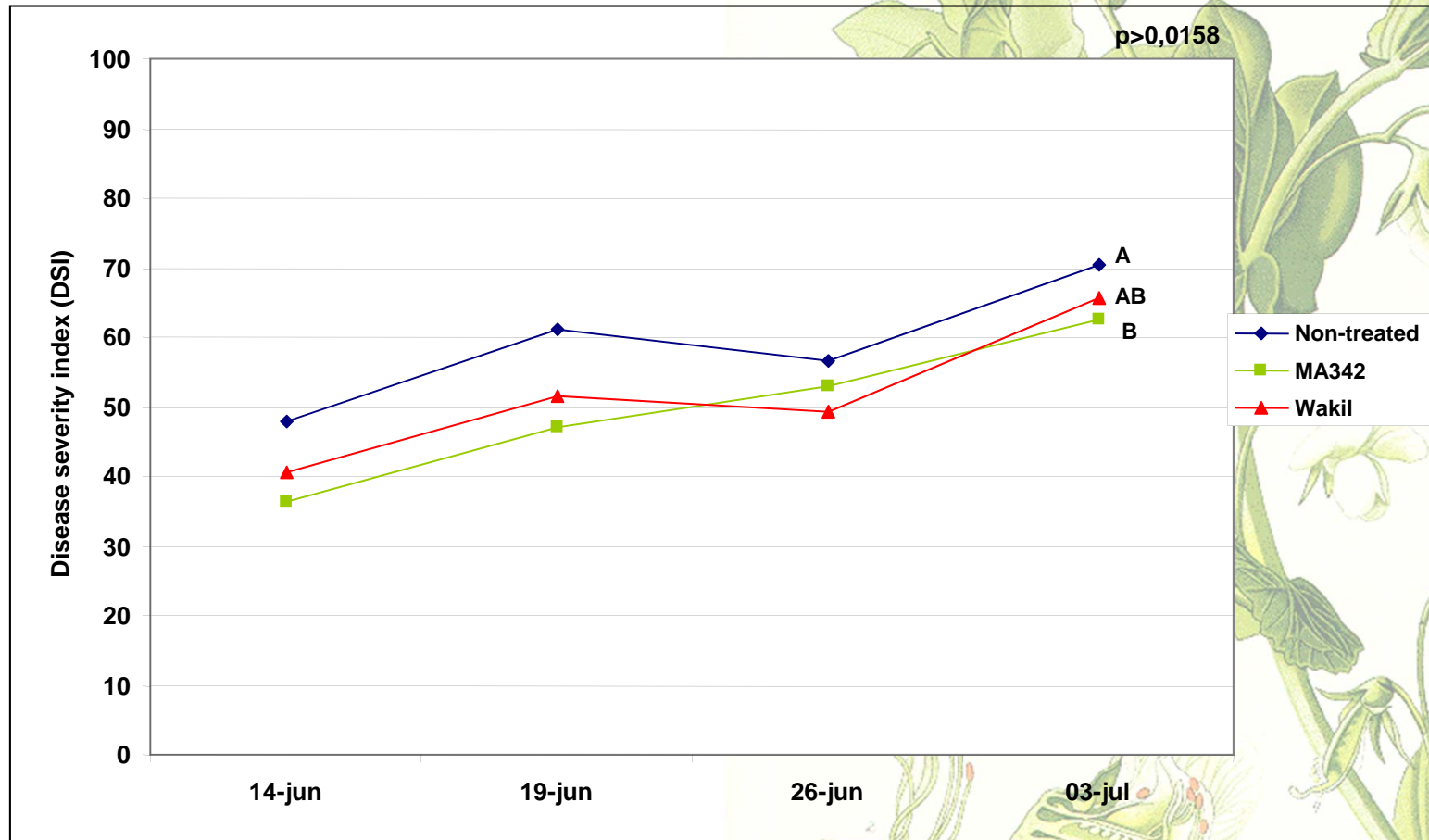
Cedress - Modern seed treatment for peas

**Summary large scale trials on 460 ha,
2007 to 2009**

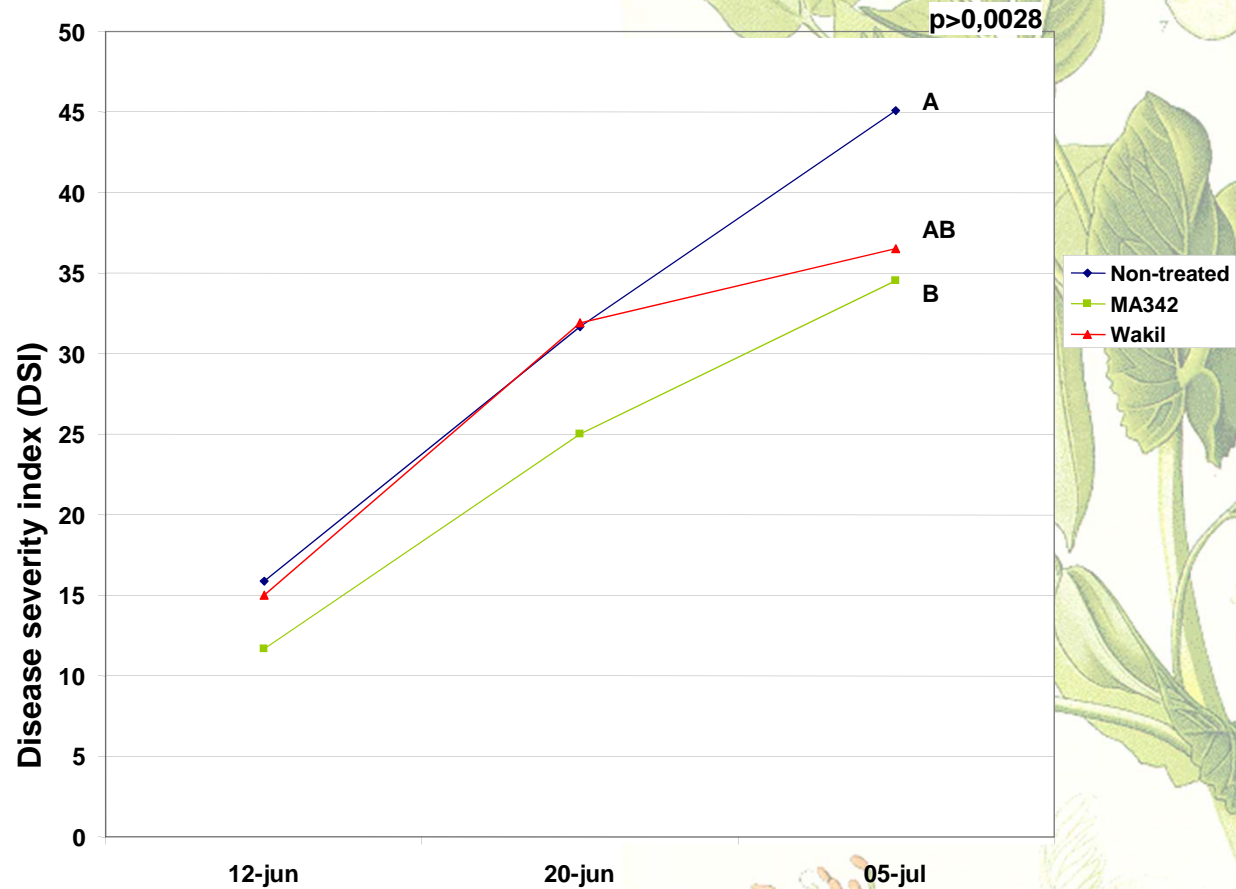
	Chemical standard	Cedress
Plant emergence	100	102
Infected epi-/hypocotyl	100	80
Leaf spots	100	71
Yield	100	106

Pea root rot is one of the most destructive diseases of peas worldwide





Seed treatment with bacterial isolate MA342 gave a significantly lower disease severity index (Aphanomyces root rot) than non-treated.



Seed treatment with bacterial isolate MA342 repeatedly gave a significantly lower disease severity index (Aphanomyces root rot) than non-treated.



MASE Laboratory

More microbial products in pipe-line:

- Control of seed-borne, soil-borne and storage diseases in vegetables
- Plant growth promotion in field vegetables, greenhouse vegetables and forest nurseries

MASE Laboratory offers research and development services.

VISIT OUR POSTER





Thank you for your attention!

For contact:

margareta.hokeberg@maselab.se

chris.welch@maselab.se

