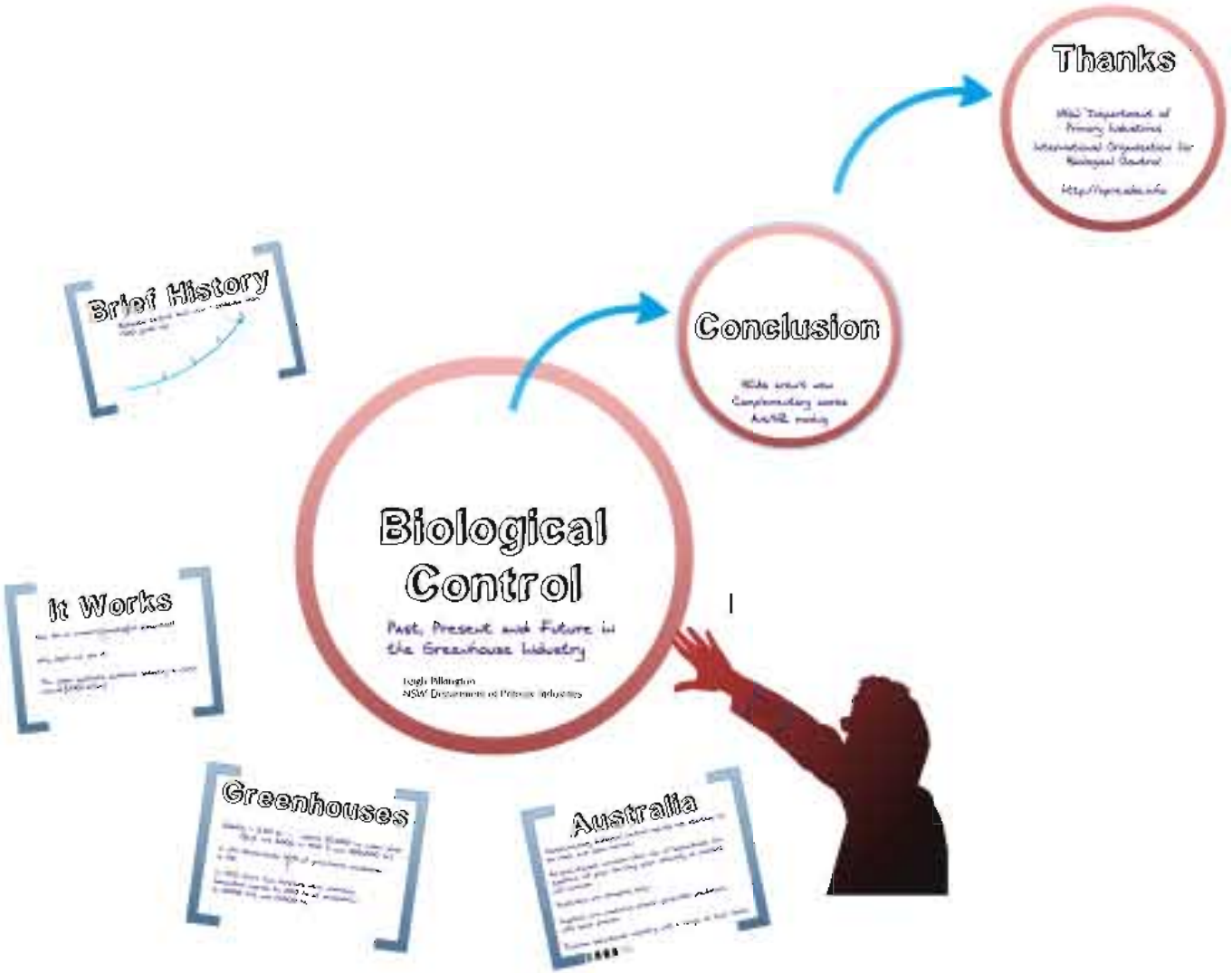
Thanks
Conclusion
Brief History
Biological Control
Past, Present and Future in the Greenhouse Industry
It Works
Greenhouses
Australia

Biological Control

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Leigh Pilkington
NSW Department of Primary Industries

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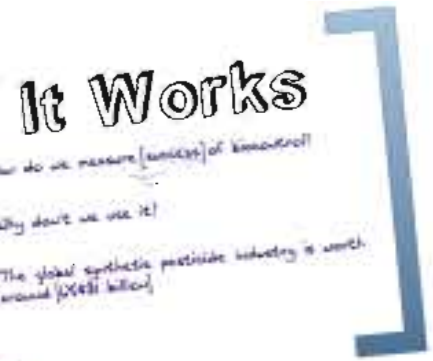

Brief History

Biological control isn't new - evidence from 1700 years ago

300 - evidence of field biocontrol

1200 - Parasitoids in China

1600 - Parasitoids in Europe

uses

Réaumur and lacewings
Darwin and hoverflies
Kirby and Spence and ladybirds

1734 - Augmentative biocontrol starts

00 - Parasitoids in Europe

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34 - Augmentative bioc

predators in greenhouses take off

1930 - parasitoids in greenhouses

Europe, Canada, Australia, New Zealand
1996: 20/35

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1950 -

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Europe, Canada, Australia, New Zealand
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Bit of History

Biological control isn't new - evidence

1700 years ago

1950 - predators in greenhouses take off

1930 - parasitoids in greenhouses

1734 - Augmentative biocontrol starts

1600 - Parasitoids in Europe

1200 - Parasitoids in China

300 - evidence of field biocontrol

0

500

1000

1500

It Works

How do we measure [success] of biocontrol?

Why don't we use it?

The global synthetic pesticide industry is worth around [US$31 billion]

150 spp. available

SUCCESS

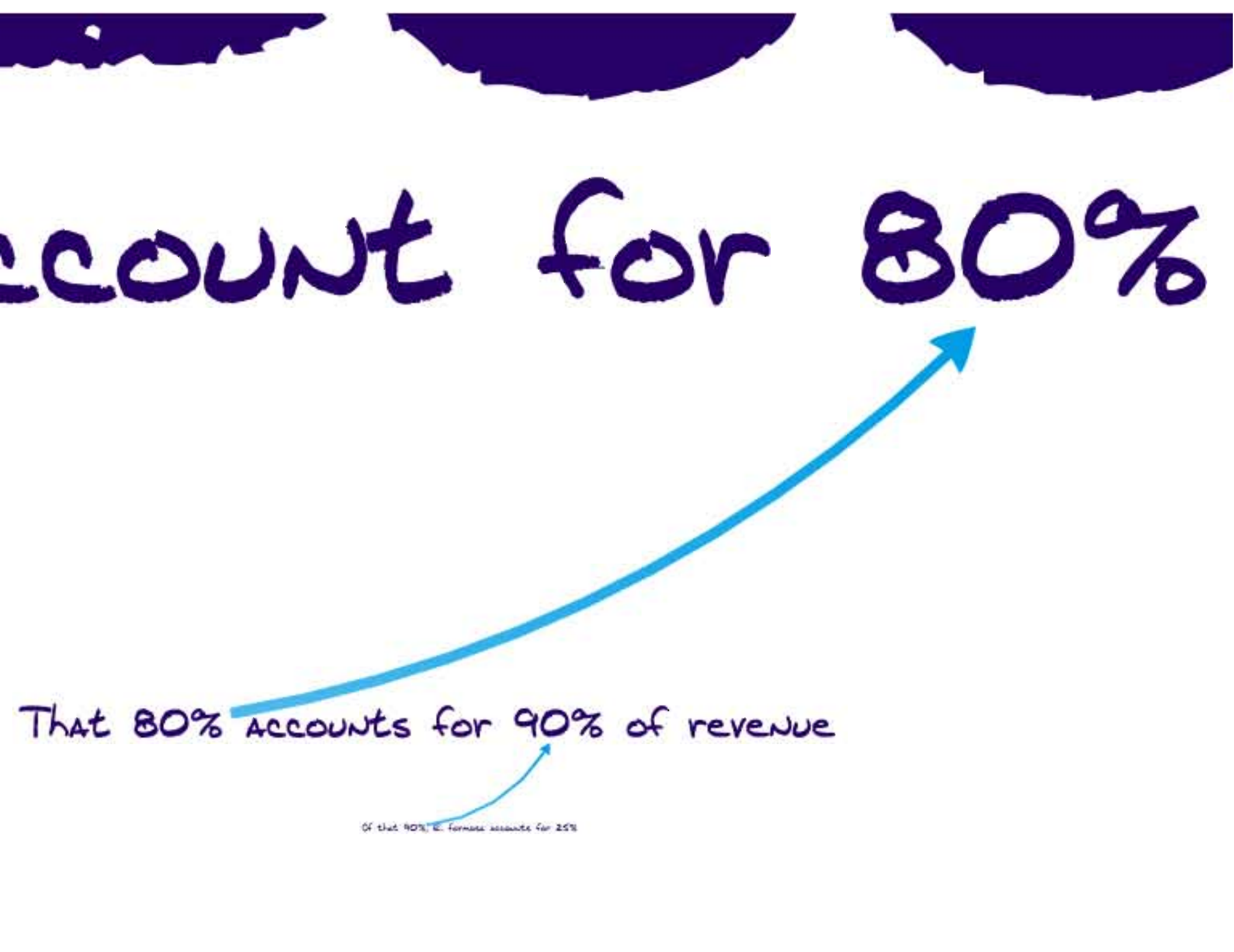
30 spp. account for 80%

weet pepper in Spain

& IPM

...ces...

30 spp. account for 80%


ccount for 80%
That 80% accounts for 90% of revenue
Of that 90%, i.e. formers accounts for 25%


ts for 90%
Of that 90%, E. formosa accounts for 25%

8,000 ha sweet pepper in Spain

100% IPM

30M Euros

How do we measure [suc

8,000 ha sweet pepper in Spain
100% IPM
30M Euros

Why don't we use it?

The global synthetic pes
around [US$31 billion]

How do we measure [success] of biocontrol?

Why don't we use it?

The global synthetic pesticide industry is worth around [US$31 billion]

US$ 31,000,000,000....

While growers have access to cheap, readily available and effective pesticides they will use them

It Works

How do we measure [success] of biocontrol?

Why don't we use it?

The global synthetic pesticide industry is worth around [US$31 billion]

Greenhouses

Globally > 2.5M ha ..... approx 50,000 ha under glass
(that was 2006, in 1999 it was 300,000 ha)

In the Netherlands 90% of greenhouse production is IPM

In 1970 there two suppliers were providing biocontrol agents to 200 ha of production.
In 2000 this was 15,000 ha.

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Australia

Complementary biological control agents are starting to be more and more common

As greenhouses increase their use of biocontrols, the suppliers will grow. As they grow, diversity of product will increase

Pesticides are dropping away

Suppliers are producing several generalist predators with good promise

Diverse greenhouse industry with a range of tech levels

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Conclusion

BCAs aren't new

Complementary works

Aus/NZ moving

Thanks

NSW Department of Primary Industries

International Organisation for Biological Control

http://aprs.iobc.info